

# American Aviation

*The Independent Voice of American Aeronautics*

WAR DEPARTMENT  
APRIL 1, 1947  
SERIAL RECORD

## Straight Thinking

**T**HE PESSIMISM in recent months because of the critical financial conditions of a few airline companies has resulted in a peculiar brand of negative thinking which is attempting to create the impression that the air transport outlook, especially internationally, is beyond redemption.

*Fortnightly Review*

This negative thinking can be very serious if it prevents or handicaps American enterprise in developing air transportation to meet the new United States requirements throughout the world and to provide the kind of swift and efficient transportation which the

world needs. Some purveyors of bad news with certain objectives in mind would have us believing that on the basis of a single year's trial, our entire air transport program abroad has been found wanting and should be summarily scrapped.

The United States has stepped into the role of world leadership whether we like it or not. There is no other choice. The commitments have already been made. The U. S. is inextricably bound economically and politically with world problems even though a great many of the citizenry are ill-prepared either in mind or experience to accept these new responsibilities. And U. S. air transportation is an integral part of this expanded outlook.

America's world responsibilities are enormous. Just how big they are can be gleaned from *The United States News*, the weekly magazine of national affairs which does a superb job of reporting and interpreting. In its March 21 issue one reads:

"A \$31,885,000,000 U. S. aid and development program is in the works. Most of that program has had Congress approval.

"Capital equipment is to be supplied in big volume. Food and clothing are to continue to pour out of U. S. . . . Dollars, on loan, to be translated into goods, are supplied liberally by Government, and private capital for foreign investments is to be tapped.

"Brains, engineering brains, financing brains, administrative brains, are to be exported in large quantities. Some military brains will go, too.

"There is a \$341,000,000,000 investment already made in war, a \$31,885,000,000 postwar investment already either set or about to be set. U. S. couldn't pull back now, if it wanted to."

And later in the same issue:

(Turn to page 6)



### Reassures Aircraft Industry

Rep. Albert J. Engel (R. Mich.), chairman of the War Department subcommittee of the Appropriations Committee, has promised the aircraft manufacturing industry that the future construction program "will be substantial and in keeping with the needs of our national defense." Engel's influence is expected to weigh heavily in fixing the military budgets of the next two years. (See story on page 34).

## In This Issue

Civil Plane Makers Wary  
Of Federal Aid ..... 11

CAB Eyes Cost of Airline  
Support ..... 12

Aircraft Firms Face Critical  
Period ..... 34

CIRCULATION COPY 34



# 100% OF AMERICA'S MAJOR AIRLINES RELY ON BENDIX RADIO

Where scheduled, dependable airline operation is maintained—anywhere in the world—Bendix Radio equipment fills a vital need. For radio navigation and communication, Bendix is standard not only in America, but the world over. This wide acceptance is firmly based upon Bendix Radio's outstanding experience in building radio navigation and communication systems for all types of aircraft.

America's airlines specify Bendix Radio for the finest in radio equipment  
— backed by the greatest name in aircraft radio.

## *It's New!... It's Bendix!*

### IMPROVED BENDIX TYPE MN-76A IRON CORE LOOP

For higher speed flying, Bendix Radio has the answer. This new, smaller iron core loop has a greatly improved electrical and aerodynamic design — outperforms older loops having ten times the drag. It's new — it's basically better—it's built by Bendix Radio.



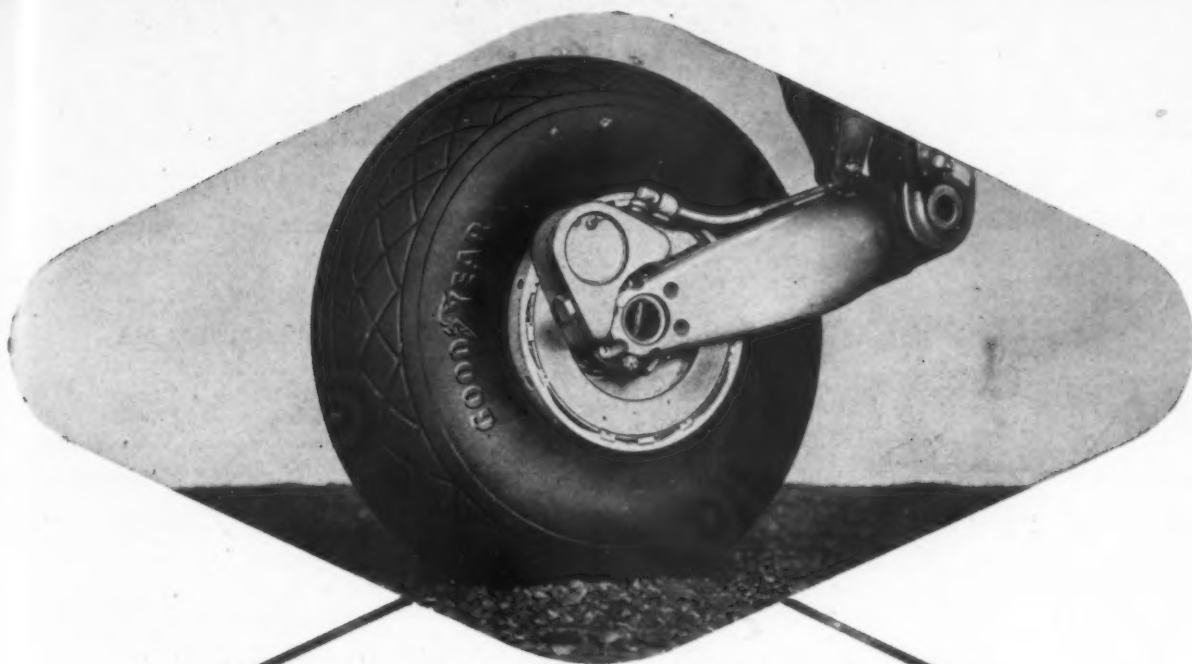
Write for a copy of this interesting book

**BENDIX RADIO DIVISION**  
OF BENDIX AVIATION CORPORATION  
**BALTIMORE 4, MARYLAND**

West Coast Branch: 1239 Airway, Glendale 1, California







## Compact! Light! Sure!

*for smoother, safer braking*

Look at the slim compactness of the Goodyear Single Disc Brake shown above and you'll see why it's being specified on more and more commercial aircraft, as well as light planes. It hugs the wheel, simplifies retraction. It is light in weight, yet exceptionally powerful—excels any other brake of its size and weight in energy absorption. It is *self-adjusting*, pedal-feel never varies, linings wear longer. Self-cooling.

too; no excess heat to "burn up" tires. Relining takes only a few minutes. Approved for all types of ships. Specify it for greater braking dependability on your new ships, along with bantam-weight Pliocel safety fuel cells, and Airfoam cushioning for luxurious comfort. For data, write: Goodyear, Aviation Products Division, Akron 16, Ohio or Los Angeles 54, California.



Pliocel, Airfoam—T. M.'s The Goodyear Tire & Rubber Company

**MORE AIRCRAFT LAND ON GOODYEAR**

**TIRES THAN ON ANY OTHER KIND**



# American Aviation

Volume 10 Number 21

The Independent Voice of American Aeronautics

April 1, 1947



Wayne W. Parrish, Editor and Publisher



Eric Bramley, Executive Editor

Leonard Eiserer, Managing Editor

## Editorial Associates

Gerard B. Dobben  
Daniel S. Wentz, II

Fred S. Hunter  
Clifford Guest

Scott Hershey  
Keith Saunders

David Shawe  
Frank M. Holz

Louis Bruchiss  
Clinton Harrower

## CONTENTS

### General News

Issue of Federal Aid for Civil Planes Revived	11
CAB Investigates Cost of Airline Support	12
10% Passenger Fare Increase Approved	13
CAB Blocks Surface Carriers from Air	13
Airline Passenger Miles Total 44% of Pullman	14
CAA Slices Aircraft Recordation Fee	14
ATA Bill Aids Freight Prospects	15
PO to Have Sufficient Mail Funds	15
National Park Service Curbs Air Operations	15

### Airlines

Opposition Forms to WAL-UAL Deal	17
N. Y.-Chicago Busiest Airline Route in U. S.	17
TWA Action Expected April 24	18
Carriers Seek More Mail Pay	18
Airline Head Explains Executive Shortage	19
Four New Airlines Urged for Middle Atlantic	20

### Non-Scheduled

Heavy Traffic to Alaska Expected	27
----------------------------------	----

### Fixed-Base

Dealers Need Larger Profit Margin	28
NATA Maps Expansion Plans	28

### Around the World

Philippine Airlines Flourish with U. S. Surplus	29
CAA to Establish Air System in Philippines	30
U. S. Approves Pan Am By-Passing Balkans	31

### Manufacturers

Plane Makers' Plight Causes Concern	34
2,054 Civil Planes Shipped in January	35
Only 1.6% of Sales Becomes Profits	35

### Financial

Five Airlines Report 1946 Salaries	36
------------------------------------	----

### Operations and Maintenance Review

Merits of Progressive Overhaul Debated	37
UAL Tests Support Thermal Anti-Icing	38
New Connie Gets Type Certificate	38
TCA Faces Icing Throughout Year	39

### Features

Editorial	1	Airline Commentary	25
Wings of Yesterday	7	CAB Proceedings	26
Letters	7	Manufacturing Personnel	35
Books	7	Thirty-Hour Check	40
Background and Trends	8	Operations-Maintenance	
Aviation Calendar	14	Personnel	41
CAB Briefs	20	Index to Advertisers	42
Airline Personnel	25		

## The News Magazine of Commercial Aviation

Vice-President-Business and Advertising  
O. Rhodius Elofson

### Main Editorial and Business Offices:

American Building, 1317 F Street, N. W., Washington 4, D. C. District 5735.

Chicago: 139 North Clark St., Chicago 2, Ill. State 2154.

Los Angeles: 1404-S Park Central Bldg., 412 West Sixth St., Los Angeles 14, Calif. Trinity 7997, Fred S. Hunter, Mgr.

Correspondents: James Stanton, London, England; R. N. Hughes-Jones, Melbourne, Australia; Leo White, Auckland, New Zealand; Douglas Clark, Buenos Aires; and correspondents in major European and Latin American Capitals.

American Aviation is published the 1st and 15th of each month by American Aviation Associates, Inc., American Building, 1317 F Street, N. W., Washington, D. C. Printed at the Telegraph Press, Harrisburg, Pa. Subscription rates for the United States, Mexico, Central and South American countries—\$4.00 for 1 year; \$7.00 for 2 years. Canada—\$4.50 for 1 year; \$8.00 for 2 years. All other countries—\$5.50 for 1 year; \$10.00 for 2 years. Entered as Second Class matter in Washington, D. C., and Harrisburg, Pa.

Publishing Corporation: American Aviation Associates, Inc. Wayne W. Parrish, President; Albert H. Stackpole, Vice President; Eric Bramley, Vice President; O. R. Elofson, Vice President; Maj. Gen. E. J. Stackpole, Jr., Secretary-Treasurer.

## Other Publications and Services:

**American Aviation Daily:** The only daily news service for the aviation industry. Published daily except Saturdays, Sundays and holidays since 1939. Dispatched via airmail or surface mail for overnight delivery in the United States. Subscriptions: \$15 one month, \$170 one year. Airmail delivery to points outside the United States at additional cost to cover postage. Service Bureau available to all subscribers. CLIFFORD GUEST, Managing Editor.

**International Aviation:** A weekly newsletter of aviation trends and news in foreign countries. Published on Friday of each week and dispatched via first-class surface mail. Editorial representatives in foreign capitals. Subscriptions: \$100 one year (52 issues). Airmail delivery available at additional cost to cover postage. Service Bureau available to all subscribers. FRANK M. HOLZ, Managing Editor.

**American Aviation Directory:** Published twice a year, Spring and Fall. Complete reference data on administrative and operating personnel of airlines, aircraft and engine manufacturers, accessory and equipment manufacturers, organizations, schools, U. S. and foreign aviation groups and departments, etc. Completely cross-indexed by companies, activities, products and individuals. Single copy \$5.00. Fall-Winter 1946-47 issue now available. DAVID SHAW, Managing Editor.

**American Aviation Air Traffic Guide:** Monthly publication of airline schedules, rates and regulations for passengers and cargo transportation by commercial air transport. Supplements furnished subscribers covering changes occurring between issues. Subscriptions: U. S. and Latin America \$7.50 one year (12 issues and supplements); Canada \$8.00. All other countries \$9.00. Published and revised from editorial offices at 139 North Clark Street, Chicago 2, Illinois. (Telephone: State 2154). H. D. WHITNEY, Managing Editor.

**Research and Library Department:** For the convenience of subscribers in obtaining aviation information; bibliographic data on aviation books and periodicals available. Address inquiries to American Aviation, Research and Library Dept., Washington 4, D. C. Rhoda Frances Smith, Director of Research and Librarian.

AMERICAN AVIATION



# DOUGLAS FOLLOWS THROUGH

with a dependable 9-point Service Program



## FIELD SERVICE REPRESENTATIVES

The average Douglas field man has 10 years experience with the Company. He is informed daily of all new developments...has the latest technical data at his finger tips.

## PLANT SERVICE ENGINEERS

Their job is to transmit to you and our Field Men the latest facts and figures from Douglas research laboratories, engineering, shop, inspection, and flight departments.

## ENGINEERING-SERVICE LIAISON

Duties of this group are to obtain specific data from Engineering for your use, and to supply service experience to Engineering toward constantly improving Douglas equipment.

## A Far-reaching Program Geared to Cut Maintenance Cost...Keep Your Planes in Use

● Only one thing pays off in operating transport planes: *keeping 'em flying!* We at Douglas can't do much about schedules or weather; but we can help you keep planes mechanically available.

That's why Douglas has a vigorous program of service...why the entire resources of this company through Douglas Service are aimed at one objective: to make Douglas Transports the most "usable" airplanes in the world.

By making full use of the Douglas 9-point Service Program outlined here, you can reduce maintenance time. You can cut the cost of repairs and service. You can keep more planes in the air.

We have the tested methods and the factory-made parts so vital in expert service work. And we have the trained men to help you. Our experience, gained through twenty years of service to the airlines of the world, is yours for the asking.

DOUGLAS AIRCRAFT COMPANY, INC., SANTA MONICA, CALIFORNIA

If you are not taking full advantage of the services offered by Douglas, write for a free copy of our booklet "Service Program for Douglas Transports."



- RELY ON THIS DOUGLAS 9-POINT PROGRAM**
1. FIELD SERVICE REPRESENTATIVES
  2. PLANT SERVICE ENGINEERS
  3. ENGINEERING-SERVICE LIAISON
  4. SERVICE PUBLICATIONS
  5. SERVICE EQUIPMENT
  6. MAINTENANCE TRAINING
  7. SERVICE ANALYSIS
  8. SERVICEABILITY
  9. SERVICE CENTER SYSTEM

**MORE PEOPLE FLY  
MORE PLACES BY DOUGLAS**





# Editorial

(Continued from Page 1)

"Businessmen will do well to get deeply interested in world trade, to find where they may fit into what obviously is to be an expanding field of U. S. interest and activity abroad. It's to be settled now that the flag will follow the dollar into the far reaches of many areas in the world."

There is no parallel today to the period after World War I when foreign loans were made without proper caution or without direct concern or follow-up, resulting in disastrous losses to American investors. There is a World Bank, a Monetary Fund, a U. S. Export-Import Bank, plus a far greater realization of the problems and the needs. The force of events has plunged the United States directly into world affairs with a vengeance.

A network of U. S. international air routes is an absolute necessity. Before World War II the U. S. stake in international air transport was relatively unimportant. It didn't make much difference how many routes we had or how many operators. Today's job is different. It is a big job tied in with the U. S. stake in world economics, commerce and politics. We don't need one team, we need a number.

There is too much froth about "foreign competition" when the U. S. has no real competition or even any real threat of harmful competition if we accept our responsibilities. There are eight airlines flying the Atlantic. These eight airlines are totaling 44 flights a week. Three American carriers operate 33 of those trips. No more need be said. But trans-Atlantic operations are but a small and relatively unimportant part of the whole picture. The areas beyond the popular Atlantic area are where U. S. needs lines of communication.

It is sad, then, to pick up the March issue of our contemporary, *U. S. Air Services*, and find an article dealing with the future of Trans-World Airlines, and to find but faint comprehension of the need for U. S. international air transport. The weaknesses in TWA's situation are apparent to all who are conversant with the subject and the key to the weaknesses is not, as the writer in *U. S. Air Services* attempted to imply, the fanciful flights of dreamy airmen into global accomplishments, but rather the extravagant manner and poor personnel selection that went into the pioneering.

We find in *U. S. Air Services* a disturbing assumption that the justification for U. S. global air routes is to haul American tourists around the world. Such thinking is childish, but let us quote from the article:

"What are some of the immediate postwar problems for a global operation ambitious to serve Europe, the Near East and Asia?", the magazine article asks. "They are primarily traffic problems, we think. With a tour of Europe estimated to cost about 65% more than it did before World War II, most tourists will wait for more settled conditions. Where cost is not a consideration the inconveniences will hold back travelers who can wait until facilities are restored in war-torn areas."

"Swiss winter resorts will lose business to Colorado and Idaho", the magazine continues blithely. "The French Riviera will envy the leisure class trade in Florida and California. The global airline will see potential revenue going to domestic air carriers that fly the stay-at-home vacationists".

This is not the type of thinking that built America's air transportation. U. S. flag lines were no more established to carry American vacationists to Switzerland than United Air Lines would justify its existence on the basis of tourist and vacation travel to the west. Naturally vacation business is welcome by any medium of transportation, but the real need for U. S. international air transport is far more serious. The writer of the *U. S. Air Services* article quite obviously has never seen an international plane load or unload, and is under the quaint assumption that the only transportation outside the U. S. is pleasure travel.

We cannot go along with those who scoff at men like Jack Frye who had the courage and enterprise to accept the challenge of international air transport in the interest of the United States. It is true that TWA bit off a big program, has been beset by opposition to financing plans which would have made the expansion program complete. It is true that insufficient business judgment was used in much of the international development. But the international plans, *per se*, were not far from wrong and were in the U. S. national interest.

But we are inclined to line up with L. Welch Pogue, former CAB Chairman and now president of the National Aeronautic Association, who spoke the other day in Boston on the intriguing subject of "Aviation Needs a Higher Standard of Thinking."

Said Mr. Pogue:

"We are painfully slow in acquiring a new standard of thinking about the promotional possibilities of aviation. All geographical frontiers have disappeared but new commercial frontiers have taken their place with rapidity as aviation has developed. All the world will soon be available to the merchant and producer of goods through the use of aviation. Any line of thought which keeps American business or European business, or business in any other section of the world, localized in its outlets as it has been for centuries is not up to the standard of thinking now demanded by aviation."

There is a strange idea afoot that U. S. airlines are in business only to carry Americans to and from certain points. Throughout the world there are business people, traders, agents, government personnel—people of all races and nationalities—who are moving about and need air transport. One of the outstanding air transport leaders in Europe and long an international operator, said recently that 60% of the world's air transport business can be carried by American carriers if the American companies are given the chance to develop properly.

Trans-World Airlines undertook a challenge. Its performance to date has been exceptionally good despite many mistakes. It expanded at a very rapid rate but it fulfilled to a large degree its commitments. The dreams of pioneering Jack Frye have not been as nebulous as some would have them. It is to be hoped that Howard Hughes will give the international operation a chance to stand on its own feet, which it is close to doing since the recent trimming. The U. S. needs not one system but a number of systems of international networks in line with the new U. S. responsibilities of world leadership. This is not the time for negative thinking.

WAYNE W. PARRISH

AMERICAN AVIATION



# Wings of Yesterday

## 25 Years Ago

Aeromarine U-8-D motor successfully completed the U. S. Navy 292-hour test at Keyport, N. J. (April 1, 1922)

A new bombing record for Aberdeen Proving Grounds, Md. was made from the Army Airship C-2, piloted by Lt. Max F. Moyer and M/Sgt. William E. Fitch, U.S.A.S., with Capt. E. R. Strubling, Ordnance Dept., as bomber. Seven hits out of eight bombs dropped were recorded. The bombs were dropped from an altitude of 2,000 ft. on a concrete block, 200 by 200 ft. (April 6, 1922)

Two five-ship formations from Mather Field, Mills, Calif. welcomed General Joffre upon his arrival at San Francisco. (April 6, 1922)

## 15 Years Ago

The National Aircraft Show was held at Detroit, Michigan under the auspices of the Aeronautical Chamber of Commerce. (April 2-10, 1932)

The "Graf Zeppelin" made a round trip flight from Friedrichshafen, Germany to Pernambuco, Brazil. (April 5-13, 1932)

# Letters

## Air-Rail Battle

To the Editor:

I subscribe to *American Aviation* because it is one of the most newsworthy magazines in the industry.

Lately, however, *American Aviation*, like many another aviation publication has taken up the jealous stick of sarcasm in its editorial comment. This sarcasm has been pointed at newspapers, magazines, etc., who fail to minutely report the aviation industry's highly technical and baffling news (baffling, that is, to the layman . . . and to the industry, too, sometimes). More recently, *American Aviation* has taken up the 'battle of the rails.'

True, some railroads independently have been presenting a strong case against the airlines. But the co-ordinated advertising of the railroads which carries the by-line—'When you've got to get there, take the train,' is not in my opinion destructive. After all it's true, isn't it?

Editorials cite the cases of snowbound trains, late trains, et al, freight wrecks and what not. However, when one compares such comments with their overall picture, one finds an admirable picture of pretty good service under obsolete equipment difficulties, increased costs, strikes, shortages of materials, et al. Railroad service is not as good as it might be . . . I think the railroads know that. But when one compares the service with billions of passenger miles operated, it's pretty good.

On the other hand, I've flown many a scheduled and non-scheduled airline passenger mile and undergone some of the same kind of service I've had on the railroads (and to be sure this is not representative service of either the railroads or the airlines, and I think we'll all admit that) . . . unheated planes in January (this on a scheduled line); plane parked out on ramp beyond a parked

plane whose engines were being run up, and 25 other passengers and I were forced to walk through the blast; late planes . . . up to 8 and 10 hours; discourteous service (also a scheduled line); lost baggage; change of planes; no meals at noon (this was a non-scheduled carrier); mechanical difficulties and forced landings; and I've continued more than one plane flight interrupted by weather, by train.

So why don't we all take our hat in our hand—airlines and railroads alike—and admit we aren't perfect, admit the other fellow may have something, and admit, what we know to be true, that we're all here to stay, and instead of destructive sarcasm which invites the public's disgust for both the directing party and the directed, branch out into some constructive energy for better transportation of all forms. That's what we're after . . . not just better airlines, or just better railroads, but better both. If the railroads won't take the initiative, why not show the new era of aviation to the public and do it ourselves? I'm fed up with this sarcasm and I rather imagine the public is too . . . from both sides.

ROBERT G. AVERILL  
President and Treasurer  
Norseman Air Transport, Inc.

## Co-Pilots as Intruders

To the Editor:

I have been pleased to note that several times recently you have mentioned the growing dissatisfaction among the airlines' co-pilots at the treatment they have received and continue to endure from the Air Line Pilots Association.

It seems impossible to make Dave Behncke realize or care that co-pilots make up over half the membership of his organization. Most co-pilots, and a high percentage of the captains, especially the younger ones, resent the attitude of ALPA's management, as well demonstrated by the revolt in the recent convention.

Past history and current negotiations show that the wages and working conditions of the co-pilots are much less than secondary as far as the ALPA is concerned. When compromises are made, the co-pilots are always first to be sacrificed. The opinions of co-pilots are not encouraged. Instead of being considered as members and brother pilots in the organization, co-pilots are treated more as intruders who are to speak only when spoken to.

I think the majority of the captains do not share the ALPA's thinking in this regard but through years of ALPA neglect the attitude is hard to eradicate. Local councils are largely dominated by Behncke stalwarts or old-timers who have conveniently forgotten they were once co-pilots.

I would like to sign this as I know how you feel about anonymous letters, but I simply can't take the chance under the present setup of the ALPA. Co-pilots aren't allowed to criticize!

## AN AIRLINE CO-PILOT

### Favors Air Safety Board

To the Editor:

The independent Air Safety Board (opposed in your Feb. 15 editorial) possesses one excellent characteristic which alone favors its reestablishment. A crash investigation should be completely thorough, even to the point of questioning the capability of the CAB and CAA. The present procedure allows the CAB to investigate itself and its affiliated CAA. This investigation may not always be completely unbiased.

Unquestionably the previous board had shortcomings, but these could be rectified in a new non-political independent Air Safety Board.

ROBERT A. STONE  
Captain, United Air Lines

## An Alaskan Views CAA

To the Editor:

Our present short days and bad weather is now permitting me to read my back numbers of *American Aviation*. I am especially impressed with your feature article in the April 1 issue, "Cut CAA in Half." This is

the first article of its kind I have ever seen.

I wish to extend to you my sincere appreciation for printing an article which contains facts instead of government agency propaganda.

Here in Alaska the CAA has taken advantage of the war, and the fact that we do considerable more flying than in the states, to really make a good thing for itself. There are at least 6 CAA personnel for every airplane operating. They have built elaborate stations all over the territory with large landing fields, always built cross wind, or on a river bank where they wash away at least once a year, thereby allowing them to rebuild them, and about the only planes which use the fields are their own airplanes which bring in large quantities of supplies to maintain the fields . . . so they can land with more supplies.

We pilots and operators who make our living flying in Alaska use the village airstrips or a sand bar in summer, or land anywhere on the ice or snow in the winter. We consider it a disgrace to use any of this corrupt organization's facilities. They also maintain a large search and rescue squadron, which has never, not once, found anyone who was lost. But they never mention this fact. They merely praise the efficiency of their organization and their ability to "help" the operator.

This same CAA wanting to maintain the lucrative setup which they have here have passed rules that no one can fly for hire without a certificate to do so issued by them. And let any operator who refuses to bow at their feet try to get a certificate. It's amazing that a free people will allow such an organization to exist in America, and more amazing that it should exist on our already overtaxed government.

Bring out more articles such as the one I have just mentioned. You are in a position to do something. We who are under CAA's thumb dare not raise our voice for fear of being charged with an act unbecoming an airman and lose not only our means of livelihood but also a lifetime accumulation of property.

NAME WITHHELD

# Books

THE AVIATION ANNUAL OF 1947. Edited by Reginald Cleveland. Harper & Bros., New York. 250 pp. \$5.00.

The prolific author of this latest work is almost entitled to head up The Rex Cleveland Book-of-the-Month Club, so rapidly have his aviation books been coming off the presses.

This one is a running account of the year's significant developments in the air world and a glimpse of things to come. It is definitely not a reference manual of statistics, etc., but is rather a series of reviews of the various fields of aviation. It is amply illustrated. Contributors include such men as W. A. M. Burden, Assistant Secretary of Commerce for Air; Ted Wright, CAA Administrator; Robert Ramspeck, v. p. of the Air Transport Association; General Carl A. Spaatz, Commanding General of the AAF, and others.

## AIRPORT OPERATION AND MANAGEMENT.

By Charles A. Zweng. 312 pp. Illust. Published by Pan American Navigation Service, 12021 Ventura Blvd., North Hollywood, Calif.

This is a textbook for universities and aeronautical schools as well as a useful guide for airport operators. It has much useful text material and is comprehensive in its treatment of all subjects concerned with airports and airport management.

Major chapter headings are planning and building the airport, airport operation, management, making the airport pay, and regulations. Regulatory material is abundant. The book is well illustrated throughout and deserves to be widely used and recognized as a standard work on the subject.



# Background and Trends

(Significant Developments and Forecasts Based on the Fortnight's Top News)

**Awfully Quiet:** It's been a long time since any CAA official has predicted 400,000 or more personal planes by 1955.

**No Choice:** Most important factor in the airline passenger fare increase is that airlines had no choice. CAB told them flatly to ask for fare jump. Industry itself was divided.

**Important:** CAA meeting with lightplane manufacturers this month to see what government can do to aid personal plane development can have far-reaching benefits to industry if common agreement can be reached.

**Serious Noise:** Complaints about airplane noise continue to mount and CAA gets credit for initiating steps to combat it.

**Airline Mergers:** More and more talk will be heard about airline mergers. Much may depend on CAB decision on United-Western deal.

**One Method:** Smuggling by air has been common in the Far East and is said to be a means of keeping a few small outfits alive. But it has hurt legitimate operators.

**Frye's Future:** Nobody expects Jack Frye to stay out of aviation for long, now that he is no longer president of TWA, the airline he founded.

**Big Center:** Bangkok, capital of Siam, is rapidly becoming biggest focal point for airlines in Far East. A fine airport, plus good year-round weather conditions, combine with traffic potential to make it a big air crossroads.

**KLM in Pacific:** Watch for KLM Royal Dutch Airlines to operate Pacific routes for Dutch, with KNILM, the Netherlands East Indies company, restricted to regional operations within N.E.I.

**Radio Spot:** Over 300 radio stations are using the 5-minute daily transcription of the John W. Vandercook Air Age Show prepared by Woods and Riblet with cooperation of Air Transport Association. Jack Woods is formerly of American Airlines. Most of the spots are sponsored locally. Aviation news is getting best break and widest coverage it's ever had on the air coast-to-coast.

**Cut Rates:** One non-scheduled charter operator is reported to be charging as low as \$39 for one-way tickets between New York City and San Juan, P. R. Lowest scheduled airline fare is \$96.50 one-way and \$150 round-trip on 90-day excursion rate.

**Mechanics' Jobs:** Pittsburgh Institute of Aeronautics reports that despite low prevailing market for A. & E. mechanics, it is placing majority of its students with airlines and fixed base operators. Airline starting rate averages \$1.38 per hour and fixed base starting scale averages about \$225 a month.

**CAA Repairs:** Although CAA is asking Congress to remove restrictions on use of its own repair facilities, it plans to contract even more repair work to private operators this year than last. Subject was highly controversial this time last year with operators winning fight to keep CAA from building up big government repair bases.

**Maintenance Progress:** A maintenance certificate plan, under which qualified airlines would be granted a CAA permit allowing them to set up their own procedures and overhaul time schedules, is under serious study and likely to become a fact. Airline maintenance officials like the idea behind it—they won't have to run to CAA for permission to deviate from approved procedures.

**Service Backlog:** Douglas Aircraft's service department has a six month's backlog of service bulletin writing to clear up. The work covers more than 800 separate items—many of them minor changes which operating experience has shown to be desirable on converted C-54's.

**Over-Extended:** A few oil companies are concerned about loans to local operators ever being paid off. Amounts are small in each instance—but they total into substantial figures.

**Doubtful:** It now appears doubtful that the extensive Harvard Business School study on fixed base operations will ever be published.

**NATS Problem:** Outside contract maintenance is being negotiated by Naval Air Transport Service. Personnel shortage is given as the reason. NATS planes lately have been out of service as long as four to six weeks for major maintenance at the end of each 900 hour operating cycle.

**Easier Connie Servicing:** A feature of the 649 Constellation which hasn't received much mention but will mean a lot to operators is that Lockheed has considerably modified and improved the Gold Plate version for easier servicing. Army wouldn't let Lockheed take time to work out proper location and access to accessories on the C-69, but the Gold Plate won't have to be dismantled to get at hydraulic, ignition, pressurizing and other accessories.

**Cargo Problem:** Biggest problem facing airlines in developing their cargo traffic is weather, says an airline cargo official. All-weather flying will: (1) result in shippers using air even though it may cost them more, because they will be assured of quick delivery, and (2) allow large firms to reduce inventories and eliminate warehouses. Even lower tariffs are no good if the shipper knows his cargo may sit on the ground at an intermediate point.

**Seabee Speeded:** Republic Aviation Corp. expects to produce 3750 Seabee amphibians this year. Full-scale production is on the way.

**Progress Report:** Here's what has happened to airline air mail loads since establishment of 5c postage last October: the October loads were 25.28% over September, November 27.3% over September, December up 66.67%, and January up 26.14%.

**Big AAF Plans:** If President Truman's armed forces merger with separate air arm wins Congressional approval, top AAF brass hope to have air unit surpass both Army and Navy in actual size and appropriations at early date.

**Legislative Logjam:** Some members of the House Interstate and Foreign Commerce committee are becoming impatient with Chairman Charles A. Wolverton (R., N. J.) because of his failure to appoint subcommittees, including one on aviation. The full committee is still sitting in on all hearings while important legislation is piling up.





## Here is "Psychic Income" for Executives

**T**HERE are some things you cannot pay a man to do. Included among them is wearing himself out trying literally to be every place at once in the management of a business enterprise.

There are men who are doing this, of course—conscientious, hard-working executives who take responsibility seriously and whose capabilities constantly act as a magnet for more responsibility still. But they are doing it *without pay!* For what they might be able to retain from any salary increase wouldn't be worth the effort.

There is, however, a twofold compensation for executives of this caliber over and beyond salary. You could call it "psychic income," although there is no compensation so real and material. And it is this: making it possible for such executives to get their work done in half the time and without

fatigue—plus a bonus of days of free time for relaxation, and a way to find it easily and quickly.

The Beechcraft Executive Transport plane is the answer, providing your executives with luxuriously comfortable transportation at 200 miles an hour—available at any time in any direction! It is your own private airline, which whisks you off on hunting trips as readily as on trips to and from branch plants, field works and sales conventions. More than 300 companies use the twin-engine Beechcraft in this manner!

Your nearest Beechcraft distributor is prepared with facts and figures to help you appraise company-owned air transportation in the light of your own transportation needs. He welcomes the opportunity to demonstrate to you the new Beechcraft Model 18. No obligation, of course. Beechcraft distributors are located in key cities across the U.S.A.



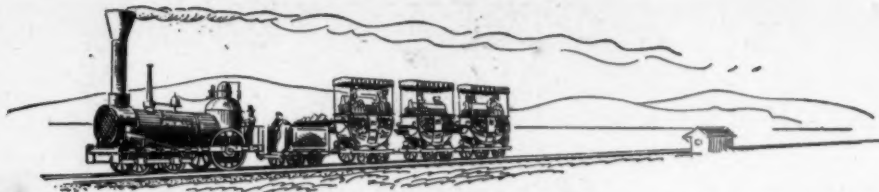
# Beech Aircraft

CORPORATION



WICHITA, KANSAS, U. S. A.





# THE PIONEER SPIRIT



Many great business organizations have enjoyed long life because they have retained the Pioneer Spirit. THOS. COOK & SON, established in 1841, has continued to register important "FIRSTS" in Travel:



## WORLDWIDE FACILITIES TO CREATE AND SERVICE AIR TRAVEL

Offices now open in 52 Countries to service travelers en route. Authorized agents of all air lines ... Planners and organizers of Air Tours and Cruises.



FIRST Organized Tour ..... 1841

FIRST Pleasure Cruise ..... 1845

FIRST European Tours ..... 1856

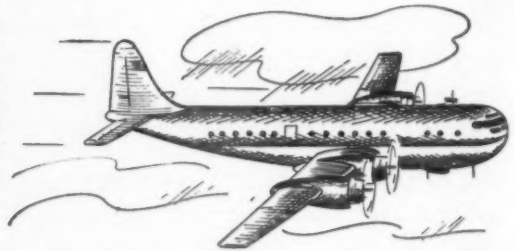
FIRST Tours to the Holy Land ... 1868

FIRST Around the World Tour ... 1872

FIRST Travelers' Cheques ..... 1874

FIRST Cairo to Cape Town Tour .. 1926

FIRST Escorted Air Tour ..... 1927



**COOK'S TRAVEL SERVICE, THE FIRST AND ONLY ORGANIZATION TO GIRDLE THE GLOBE WITH ITS OWN OFFICES.**

**"COOK'S SERVES MORE THAN FIVE MILLION TRAVELERS EVERY YEAR"**

## THOS. COOK & SON

INCORPORATED

587 FIFTH AVENUE, NEW YORK

Office Cities in U. S. A. and Canada

NEW YORK (3)  
AKRON  
ATLANTA  
BOSTON  
BUFFALO

CHICAGO (2)  
DALLAS  
DENVER  
DETROIT

INDIANAPOLIS  
LOS ANGELES  
MEMPHIS  
MIAMI

MILWAUKEE  
NEW ORLEANS  
PHILADELPHIA  
ST. LOUIS

SAN FRANCISCO (2)  
WASHINGTON, D. C.  
MONTREAL  
TORONTO  
VANCOUVER

**COOK'S TRAVELERS' CHEQUES—INTERNATIONAL CURRENCY**



## Issue of CAA Civil Plane Aid Revived

### Question of Whether Government Should Supply Funds for Aircraft Development Faces Discussion on April 15

By SCOTT HERSHEY

There is considerable wariness in the glances passing between government and private industry these days with resurgence of an old and controversial issue which has important implications for the civil plane manufacturing market.

The question, on its face, is simple enough. Should the government spend money for the development of civil airplanes by instituting basic research, or by contracting for experimental models built under specifications of the Civil Aeronautics Administration? The answer is complex and has many facets.

A year ago the CAA asked the Bureau of the Budget for a million dollars to aid in the development of civil aircraft. The Budget Bureau turned down the request. Industry, at that time, showed little if any interest, an attitude which the CAA contends influenced the position of the Budget Bureau.

#### Skepticism in Industry

Now the question is up again. On April 15, at a cautiously-called meeting, representatives of the CAA, joined by those from the National Advisory Committee for Aeronautics, will discuss with engineers of aircraft manufacturing companies just what should or should not be done by the government toward the development of better civil airplanes. The discussion will cover all other-than-transport planes, including helicopters.

There are strong signs of skepticism in the industry. Some of the plane builders still remember the "fool-proof" plane proposed by Eugene Vidal in the thirties when Vidal was a government aviation official. Present officials wish the industry would forget what a bust that project was. Some industry people contend that today's airplanes are good enough and they resent any intimation that they need somebody in government to tell them how to build airplanes. Some of them fear any sort of government intrusion into the field.

#### Light Plane Market Down

None of them will deny, however, that light plane production is off materially, that the two-place plane market places have more airplanes than they do customers. With this in mind there may be some sections of the industry ready to accept government aid. There may be, that is. That re-

mains to be seen after the industry can see more clearly just what course that aid will take.

It was not thus a year ago. The CAA was asking for money to aid the manufacturers and the manufacturers were looking out the window; they also were looking to market potentialities which in many cases did not materialize.

#### Question of Utility

There are those in the CAA who are now telling the manufacturers that the reason the personal plane market has accorded is because the engineers have not produced a utility airplane that people can use. Such a statement brings protests from the manufacturers who contend that CAA over-estimated the potential and had a large hand in over-selling the public about postwar production and the kind of airplanes that might be expected as soon as the shooting was over.

While the issue of government aid has not been burning brightly of late, it has not been dead either, and William A. M. Burden threw on some more fuel in a speech last January before

the Institute of Aeronautical Sciences.

As recently as 1945, responsible CAA officials predicted there would be 400,000 civil aircraft in the United States in 10 years. The prediction was made, Burden said in his speech, on the assumption that certain things would be accomplished, such as an NACA research program to build improved personal aircraft; energetic development by the industry of advanced types; a substantial appropriation to CAA for development contracts; a federal-aid airport program; simplification of regulations and resumption of federally-assisted flight training.

#### Passing the Blame

The CAA says nothing—or very little—has been done to improve civil airplanes and that the probable failure to reach the 400,000 goal by 1955 is that the manufacturers are not giving the public the product it wants.

Some of the manufacturers say they could give the public what it wants if CAA would only relax some of its restrictions. One of them even ventured that personal planes would be 10 years ahead of present models with fewer specifications from CAA.

The April 15 meeting may not tell the story on whether the manufacturers will accept the offer of government aid proposed by Burden, but it may go

### Issues Involve Safety and Utility

The question of government aid in the development of civil aircraft involves many problems almost certain to come up for discussion when representatives of the CAA, Army, Navy, NACA and industry engineers meet April 15. Some of these are:

#### SAFETY IMPROVEMENTS:

- a. Elimination of stall-spin characteristics.
- b. Improved windshields and visibility and de-icing provisions.
- c. Standardization of small parts including design for ready replacement of parts and components.
- d. Use of lower cost fuels.
- d. Standardized cockpit, simple and functional, and incorporating crash resistance equipment.
- e. Fuel injection or automatic carburetor heat to reduce idling failures.
- f. Improved fire protection.

#### INCREASED UTILITY:

- a. Decreased noise, including mufflers and controllable propellers.
- b. Better radios and navigational aids.
- c. More rugged landing gear to absorb impact of landings on rough terrain and better shock mountings for engines; cross-wind landing gear.
- d. Simplified controls.
- e. Increased speed range covering such subjects as spoilers, full span flaps and boundary layer control by pressure and suction blowers.
- f. Convertible or roadable airplanes with folding wings of strong design, perhaps power actuated.
- g. Turbine-propeller combinations for personal planes, jet driven propellers and assisted take-off for small field operations.



along the path of clearing the atmosphere.

One of the prime questions raised by some manufacturers is this: What happens to royalties and patent rights if a manufacturer develops an airplane under a CAA contract? Do these become available to the entire industry? Do they remain with the manufacturer who happened to get the contract? And what about the use of government funds in such a case?

There are those manufacturers who do not believe that the CAA can get funds for an aid program even if the industry does go along with the program. The CAA thinks it can get funds if it has support of industry. Burden said in his speech that admittedly it will be extremely difficult to obtain substantial funds for such a purpose under present budgetary conditions. Then he added significantly: "It will be impossible to obtain them without united industry support."

The principal items the CAA wants to talk about at the coming meeting are increased utility of civil aircraft, safety, and definite methods of obtaining improvement. Some suggestions advanced have been for the letting of development contracts on individual items; letting of contracts for an aircraft embodying a number of development items; perhaps a competition for improved craft with a substantial award for the winner. It has also been suggested that an annual tour competition be started, similar to the old Ford safety tours.

The helicopter will come in for its share with the aim of increasing the reliability of helicopter rotors, increasing the stability of the helicopter and simplifying the controls.

The whole situation comes down to this. The CAA wants to talk about government aid to improve private airplanes and the industry has agreed to listen. The two schools of thought are pretty widely divorced at the moment and it will take more than a single meeting to make them one.

## CAA Pushes Plane Noise Reduction Plan

Pending further outcome of recommendations to aircraft manufacturers regarding production of quieter planes, the Civil Aeronautics Administration, through its regional offices, is conducting a study of the noise nuisance and means of abating it.

Reports from the various regions indicate that noise-elimination is making progress in a number of cities, in some cases through legislation and in others through education, revisions in airport traffic patterns, or some other means.

Such steps have been taken at literally hundreds of fields in all sections of the country, with the result that there has been hopeful progress in meeting the complaints about aircraft noises. Even so, CAA concedes, noise still is one of the top problems of the industry and more quietness must be built into airplanes before the problem can be considered licked.

## Searchlight on Colonial, NEA

# CAB Seeks Way of Cutting Airline Costs for Government

By DANIEL S. WENTZ, II

Finances, routes, and operations of Colonial Airlines and Northeast Airlines are being investigated by the Civil Aeronautics Board with the avowed purpose of finding ways and means of cutting down the extent to which the two companies have come to depend on government mail pay for their support.

Wide comment was aroused in industry circles when CAB announced the two investigations. Observers believe they mark an important turning point in CAB's thinking about the extent to which the government is obliged to support any airline through mail subsidies. Several more investigations of the same type are expected for other airlines.

Furthermore, the investigations go far beyond the scope of any previous action taken by CAB with regard to an individual airline. The fact that the Board has selected the investigation method is clear evidence that it is not only deeply concerned with airline finances but also intends to do something concrete to cut down the government's financial burden.

The orders beginning the two investigations are broad enough to permit almost any type of action the Board may later decide to take. They do not overlook the possibility that CAB has been at fault in building up route systems that cannot possibly be operated economically. One significant fact is that neither investigation provides for a hearing, although that may well come eventually. So far, the investigations are a private matter between the two airlines and CAB.

### Comprehensive Reports Required

First step in the studies is a comprehensive report which must be submitted by Colonial and Northeast by April 18. This is to include a complete analysis of each airline's problems—financial, route, and operational—with specific recommendations for improvements. Routes that have not yet been placed in operation are included. On the basis of this analysis, each line is also required to submit a projected financial and operating plan for 1947, including a complete forecast of future financial requirements.

From the investigations, the Board wants to determine (1) to what extent, if any, each line's increasing dependence upon the government is due to uneconomic characteristics in its route pattern; (2) in what ways this dependence may be cut down; (3) whether operations not yet inaugurated should be postponed indefinitely or for a period of time; and (4) whether a further proceeding under Section 401(h) of the Civil Aeronau-

### Merger Talk

Not in years has there been so much airline merger talk in the air. The United-Western deal sparked it and the CAB orders on Colonial and Northeast have speeded it up. One airline in critical financial condition has been making approaches to other carriers but so far all the talk has been in preliminary stages, awaiting clues from CAB. One immediate development if CAB approves the transfer of Western's Los Angeles-Denver route to United will be merger or sale of Inland Air Lines by Western, it is predicted, either as a whole or in parcels to two or more carriers.

tics Act should be started. Section 401(h) deals with amending, altering, modifying or suspending route certificates.

The Board said the investigations were brought on by a study of the reports the airlines are required to file with the Board. These reports have shown a growing dependence on government support. Also, each of the lines has recently asked for a substantial boost in mail pay, an emergency increase in the case of Northeast.

The order for Northeast pointed out that that airline had once represented to the Board that it would not require air mail subsidies if it had a Boston-New York route. Northeast has been given this route "and yet Northeast's motion (for more mail pay), together with Northeast's 2780 and Form 41 reports, and other information and data available to the Board, reflects an increasing dependence upon the United States Government for financial support."

Board Member Josh Lee dissented from the majority on the two investigations. He said he could not agree to "that phase of the investigations looking toward suspension or postponement of operations of Colonial and Northeast without their consent."

## Morgan Resigns as Executive Director of Aircraft Industries

John E. P. Morgan, executive director of the Aircraft Industries Association, has resigned effective Mar. 31. Morgan, widely known in the industry, has been in his present post since Jan. 1, 1945. Before that he served a year as manager of the association's Personal Aircraft Council. Prior to joining the trade group, Morgan represented a number of personal plane manufacturers in Washington. He will take an extensive vacation before announcing his future plans.



## 10% Passenger Fare Increase Approved for Domestic Airlines

Formal approval of the 10% fare increase sought by 16 of the nation's major airlines was granted by the Civil Aeronautics Board in a rate agreement order signed Mar. 21. The agreement, effective for 90 days, was proposed to meet rising operating costs and bring non-mail revenues more in line with those costs.

The agreement itself will not bring about the fare hike, but the individual airlines can now file tariffs with CAB

### What Might Have Been

The following table prepared by AMERICAN AVIATION gives some idea of how a 10% increase in passenger revenues during all of 1946 might have affected operating results. In a number of instances, the higher fares would have meant the difference between a profit and a loss, assuming that other factors remained equal. The first column of figures shows actual profits or losses reported to CAB for the year (or for 11 months through November, in instances where December reports have not yet been filed). The other column shows additional revenue that might have been forthcoming with a 10% higher fare, and is based on actual passenger revenues received for the period.

	Net Profit or Loss	Additional Pass. Rev.
American*	\$359,580	\$5,375,000
Braniff .....	94,152	952,000
C & S*	-1,496,667	615,000
Colonial*	-571,851	247,000
Continental	34,666	371,000
Delta .....	-110,463	969,000
Eastern*	4,269,756	3,401,000
Inland*	-20,953	101,000
MCA .....	238,334	381,000
National	753,183	848,000
Northeast*	-254,678	394,000
Northwest*	424,766	1,621,000
PCA*	-1,745,359	1,552,000
TWA*	-6,576,996	3,212,000
United .....	1,804,068	4,781,000
Western	-402,798	862,000

TOTALS .. \$ -3,201,260 \$25,682,000

\* 11-month period through November.

to put the increase into effect. Although 30-day notice is usually required before a new tariff takes effect, the lines are expected to ask, and get, permission to make the increases on less than 30-day notice.

There are two exceptions listed in the agreement. One concerns extra-fare operations with Constellations and DC-6's—set at a basic level of 5½ cents per mile and specifically exempted from the 10% increase. The other applies to fares of Colonial, Continental, Mid-Continent and Northeast, some of which are now more than five cents per mile. In these cases, the 10% increase will not be applied.

There is no provision in the agreement for any round trip discounts.

April 1, 1947

## New Board Statement Blocks Air Bid of Surface Carriers

The present Civil Aeronautics Board has gone firmly and unmistakably on record opposing the entry of surface carriers into air transportation. It did so in a highly technical legal opinion that found the Board members split three ways. But the end result was—no surface carriers in the air.

The policy statement of Mar. 21 was issued in explanation of the Board's action in rejecting a petition filed some time ago by nine large steamship companies. The ship lines had asked the Board to "re-examine its interpretation of the pertinent provisions of the Civil Aeronautics Act with respect to the direct participation of surface carriers in air transportation." The Board refused to do, stating that such a re-examination would serve no useful purpose at the present time.

A long and tedious legal history lies behind CAB's latest pronouncement. Briefly stated, the Board has previously denied all surface line applications for air certificates because one section of the act (Section 408) bars a surface line from getting control of an airline, except in unusual circumstances. By interpretation, this provision of Section 408 has been made a hurdle that any surface carrier must clear even if it applies directly to CAB for an air route. Steamship companies and other surface carriers think this is a wrong interpretation.

The majority of the Board—Vice Chairman Oswald Ryan and Members Josh Lee and Clarence M. Young—said that the provisions of Section 408 cannot be considered a legal bar keeping surface lines out of air transport. But, they argued, the Board can certainly use Section 408 in considering what CAB policy shall be in separate instances.

"The Board would not be justified,"

the opinion stated, "in closing its eyes to the potential threat which the entry of surface carriers into this field (aviation) would in many cases offer to independent air carriers. We are of the opinion that a surface carrier applying for a certificate of public convenience and necessity would be under the necessity of showing that disadvantages existing . . . by reason of its being a surface carrier were avoided or overcome by other considerations of public interest supported by the record."

Net effect of the majority opinion, therefore, is to place CAB squarely on record as being opposed to any surface carrier entry into air transport.

Member Harlee Branch wrote a concurring and dissenting opinion. He said that in his view, if a surface carrier could not get into aviation indirectly by acquiring an existing air carrier, it shouldn't be allowed to come in directly in its own name except under very restricted circumstances. In effect, Branch reached the same conclusions as the majority, but he got there by a different path.

Chairman James M. Landis' concurring opinion discussed the question of a legal bar against surface carriers at considerable length. He concluded that past interpretations were in error as legal interpretations. He did not, however, go along with the majority members in giving his general policy views. "I do not do so," he said, "because I do not believe I am wise enough now to do so." Landis said he thought the Board would do better to arrive at its policy by making decisions case by case, keeping in mind that the Civil Aeronautics Act was set up particularly to preserve the inherent advantages of air transportation.



**Airport Coffee Shop, Chicago Style**—This veteran pop-corn stand that may have seen better days at a Brooklyn ball park is currently in use as the coffee shop at Chicago's "World's Greatest Airport." Prior to arrival of this mobile diner, food and refreshments were available at the new terminal only from a Canteen machine that electrocuted hot dogs in 30 seconds and from a soft drink dispenser. The city's take from the truck concession is said to be \$150 per month. The indoor coffee shop planned for the new terminal building will not be ready until June or July, under present schedule.



## Airlines Gaining

### Air Passenger Miles Total 44% of Pullman Traffic in December

U. S. domestic airlines reached new heights in competition with rail carriers for the higher fare passenger market when, last December, airline revenue passenger miles totaled 44.1% of the Pullman revenue passenger miles. This represented a spectacular gain from the 12.8% ratio existing at the beginning of 1946.

For the entire year, the airlines operated 28.3% of the Pullman revenue passenger miles, more than double the 1945 figure of 12.8%.

Shaping the 1946 airline advance was a rise of about 71% in airline revenue passenger miles, accompanied by a 23% drop in the Pullman traffic total. Official data show that the airlines operated a record-breaking total of some 5,930,126,000 revenue passenger miles in 1946, compared with 3,500,102,000 in 1945. The Pullman Co., on the other hand, reported 20,972,365,000 revenue passenger miles last year, as against 27,275,788,000 in 1945.

The competitive gain made by the airlines last year, along with a comparison for previous years, is shown in the table below, compiled from airline reports to the Civil Aeronautics Board and Pullman reports to the Interstate Commerce Commission. Airline figures are for companies operating within continental U. S. only.

Air and Pullman Revenue Passenger Miles

Year	Domestic Air (000 omitted)	Pullman (000 omitted)	Ratio of Air to Pullman
1935	279,375	7,146,269	3.9%
1940	1,045,100	8,213,878	12.7%
1941	1,384,739	10,070,406	13.7%
1942	1,398,042	19,071,589	7.3%
1943	1,606,119	25,891,465	6.2%
1944	2,229,571	28,267,090	7.9%
1945	3,500,102	27,275,788	12.8%
1946	5,930,126	20,972,365	28.3%
January	328,893	2,563,744	12.8%
February	329,483	2,082,682	15.8%
March	403,912	2,196,055	18.4%
April	461,703	1,899,120	24.3%
May	512,625	1,628,486	31.4%
June	562,722	1,774,797	31.7%
July	569,875	1,666,970	34.1%
August	624,481	1,637,261	38.1%
September	606,563	1,499,617	40.4%
October	556,018	1,406,912	39.4%
November	467,301	1,165,408	40.1%
December	506,550	1,149,313	44.1%

### Gen. Smith Heads CAP

Brig. Gen. Frederic H. Smith, chief of Staff of Strategic Air Command, Andrews Field, Md., has been appointed national commander of the Civil Air Patrol. Gen. Smith, who was war-time chief of the Fifth Air Force, succeeds Col. Earle E. Johnson who was recently killed in a plane crash.

## CAA Cuts Recordation Fee from \$5 to \$4

Successful in getting fees for recording ownership of aircraft and aircraft liens reduced from \$5 to \$4 as of May 1, private pilot associations have indicated they would continue their fight to get the Civil Aeronautics Administration to reinstate free information service on title status.

CAA Administrator T. P. Wright announced that the reduced rate on recordation fees was decided upon after six months' experience had shown that the charges could be cut. He said CAA thereby was fulfilling a promise made to the pilots when the fees were first instituted in conformance with a mandate from Congress.

James Batchelor, counsel for the United Pilots and Mechanics Association, which had battled for the reduction, said his association would renew its efforts to get CAA to furnish, by letter, information to pilots when they write in for the title status of specific airplanes. At present CAA is refusing to give this information, telling the inquirer that he must either visit the bureau in person or obtain the data through title search companies—three of which are listed in the reply.

The Aircraft Owners and Pilots Association also is active in striving for free service on title search.

### AIA's 1947 Aircraft Show Scheduled for Chicago, Nov. 1-9

The Navy Pier in Chicago will be the site of the 1947 National Aircraft Show Nov. 1-9, it was announced by Gen. Oliver P. Echols, president of the Aircraft Industries Association, sponsors of the event.

Plans are to hold flight demonstration events on nearby Northerly Isle, Chicago's downtown landing field, which is expected to be completed in time for the show.

Tod Bates, director of the show, said the emphasis this year would be more on personal and executive type aircraft, although all kinds of planes, components and accessories will be displayed, as was done last fall at Cleveland.

### Airport Management Courses Slated for Cleveland Show

Four 20-hour short courses in airport management, operation and financing will highlight the National Airport Show and Institute to be held in Cleveland Nov. 4-7 inclusive. Courses will include: (1) city planning for the air age; (2) airport financing; (3) airport design, engineering and construction; (4) airport maintenance and operation.

Sponsored jointly by the National Aeronautic Association and Air Foundation, a budget of \$70,000 has been set up for the institute and experts from various fields are now being recruited to teach the courses.

## Aviation Calendar

Apr. 9-11—SAE Aeronautics Meeting, Hotel New Yorker, New York.

Apr. 9—CAA-sponsored state aviation forum, Birmingham, Ala.

Apr. 15—European-Mediterranean Regional Air Traffic Control Meeting, ICAO, Paris.

Apr. 16-22—Third International Air Service Exhibition (Aerofair), Houtrust Hall, the Hague, Netherlands.

Apr. 16-18—SAE Transportation Meeting, Hotel Stevens, Chicago.

Apr. 17-19—AIA National Aircraft Standards Committee, National Meeting, Dayton, Ohio.

Apr. 20—Air Show, Charleston, S. C., auspices Chamber of Commerce and Junior Chamber.

Apr. 23—CAA-sponsored state aviation forum, LaGrange, Ga.

Apr. 26-27—Southeastern Air Show and Exposition, Jacksonville, Fla.

Apr. 29—International Air Transport Association executive committee meeting, Montreal.

May 1-2—SAE Personal Aircraft Meeting, Lassen Hotel, Wichita, Kans.

May 1-2—AIA Eastern Regional Traffic Committee, Hartford, Conn.

May 5-10—International Travel Exposition, Grand Central Palace, New York.

May 6—ICAO Assembly Meeting, Montreal.

May 8—Women's National Aeronautical Association national convention, Los Angeles.

May 8-9—AIA Western Regional Traffic Committee, Los Angeles, Calif.

May 9-10—Annual Michigan Aeronautical Conference, Hotel Olds, Lansing.

May 9-15—"St. Louis Air Fair of 1947" regional aircraft show, St. Louis Arena, sponsored by Aviation Council of Metropolitan St. Louis.

May 11-15—American Association of Airport Executives annual convention, Sherman Hotel, Chicago. (Airport exposition and exhibit trade show to be held in conjunction.)

May 15—IATA Technical Committee meeting, Miami Beach, Fla.

May 21—CAA-sponsored state aviation forum, Charlotte, N. C.

May 24-June 1—Michigan Aviation Week.

May 26-27—Institute of the Aeronautical Sciences light aircraft meeting, Detroit.

May 28-29—American Society of Mechanical Engineers, aviation meeting, Los Angeles.

May 29-June 1—Annual Mississippi air tour sponsored by Jackson Chamber of Commerce.

May 30-June 1—Philadelphia Air Races, Northeast Airport, Philadelphia.

June 1-3—Aviation Writers Association annual convention, Los Angeles.

June 1-6—SAE Summer Meeting, French Lick Springs Hotel, French Lick, Ind.

June 2-4—National Aeronautic Association annual meeting, Ft. Worth, Tex.

June 3-4—Personal Aircraft Council, AIA, meeting in Los Angeles.

June 4-6—Aero Medical Association, 18th Annual Meeting, Hotel Ritz-Carlton, Atlantic City.

June 7-8—13th Annual National Air Carnival, Birmingham, Ala., sponsored by Birmingham Aero Club.

June 17—ICAO South American Regional Air Traffic Control Meeting, Lima, Peru.

July 3-8—International Air Races, Long Beach, Calif., Chamber of Commerce sponsor.

July 15—ICAO South Atlantic Regional Air Traffic Control Meeting, Rio de Janeiro.

July 16—CAA-sponsored state aviation forum, Columbia, S. C.

Aug. 7-8—Institute of the Aeronautical Sciences annual summer meeting, Los Angeles.



## ATA-Sponsored Bill Aids Integrated Air Freight Operations

Speedy passage of legislation designed to remove existing obstacles in the way of a normal and healthy development of the air freight business is indicated on the basis of Congressional action taken last week.

Holding a hearing one day and reporting the bill the next, the House Interstate and Foreign Commerce committee has taken steps to make it possible for two carriers—an airline and a trucker—to establish a through freight service without taking further action with respect to rates. The necessity for publishing joint rates would be eliminated.

Supported by the airlines, the legislation was put forward by the Air Transport Association as a part of Air Cargo Inc.'s program for perfecting a nation-wide system of connecting service between truck operators and air carriers. In furtherance of this program, Air Cargo Inc. announced that it would establish soon field quarters at New York, Chicago, San Francisco, Atlanta and Dallas for the purpose of coordinating intensified domestic and international air cargo operations.

Testifying for the bill—H.R. 2109 which would amend subsection (b) of Section 1003 of the Civil Aeronautics Act—Robert A. Ramspeck, executive vice president of the Air Transport Association, said that the rate for the through service would merely be the sum of the trucker's rate from, say Racine to Chicago, and the airline's rate from Chicago to the destination point on its line.

Both rates, Ramspeck said, previously have been approved—the trucker's by the Interstate Commerce Commission, the air carrier's by the CAB.

Such an integrated operation is clearly "through service," and therefore within the meaning of subsection

### Rainbow Stopped

All work on the four-engined high-altitude Republic Rainbow transport plane has been stopped for the time being, it is reported. American Airlines recently cancelled its order for 20 Rainbows, but the Pan American firm contract for six, with option for 12 additional, remains. It is understood AAF is considering the Rainbow for Air Transport Command work and, if a contract materializes, work on the speedy transport will be resumed.

(b) of Section 1003, requiring publication of joint rates for the haul, Ramspeck explained.

"As a practical matter, that made the establishment of the proposed through service impossible, because the development and publication of joint rates between all of the airlines in the country and a very large number of truckers would have been an administrative task of enormous proportions. As you know, a joint rate is a rate which covers service by two or more carriers, and must be agreed to by all of the carriers concerned," Ramspeck stated.

## PO to Have Sufficient Mail Fund Despite Cut

House Appropriations Committee cuts in fiscal 1948 domestic and foreign air mail appropriations are not expected to have any serious effect upon next fiscal year's air mail operations.

The committee, in reporting out the Treasury-Post Office appropriations bill, included \$37,000,000 for domestic air mail, a reduction of \$850,000 from budget estimates. However, in the present fiscal year the domestic air mail appropriation was \$49,000,000 and there was an unexpended balance of \$15,262,000, because volume increases were less than expected. Actual 1947 cost, therefore, is \$33,738,000, and the \$37,000,000 represents an increase over this amount. Unless there are an unusual number of large retroactive mail rate increases, the PO will be able to get along on the amount proposed.

On foreign air mail, the committee included \$5,500,000, or \$500,000 under the \$6,000,000 budget request. However, this is a "token" appropriation, because at the time the estimate was submitted, CAB had set no temporary or permanent air mail rates on the Atlantic or Pacific.

## National Park Service Curbs Plane Operations

Resistance of the National Park Service to further "invasion" of the national parks and monuments by private and commercial aircraft has been demonstrated through an amendment to Park Service regulations forbidding such aircraft to land within such areas except when the landing is unavoidable or is for emergency rescue purposes.

The prohibition does not apply, however, to certain designated landing areas which already exist. There are eight such areas in five national parks and monuments:

McKinley Park Station Airport in Mount McKinley National Park, Alaska, and the surface of Wonder Lake, in the same park.

Death Valley Airport, in Death

Valley National Monument, California.

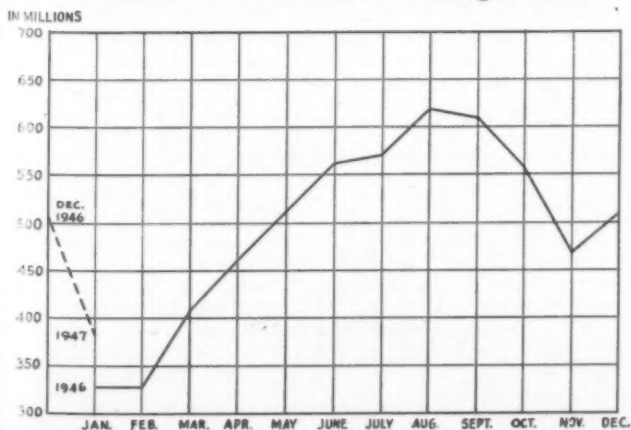
Gustavus Point Airport, in Glacier Bay National Monument, Alaska, and in the same park, the waters of Bartlett Cove, Sandy Cove and Icy Strait.

Jackson Airport, located in the Jackson Hole National Monument, Wyoming.

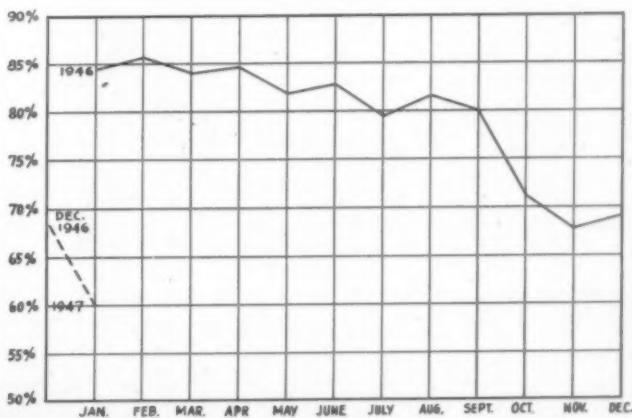
Boulder City Municipal Field, in the Boulder Dam Recreational Area, Arizona and Nevada. And the entire surface of Lake Mead in the same area.

Disturbances to wildlife, the possibility of increased fire danger, impairment and possible destruction of natural features, and the noisiness of many planes were cited by the Park Service as major reasons for restricting aircraft landings within the parks.

### Domestic Air Revenue Passenger Miles



### Domestic Revenue Passenger Load Factor





# UNITED STATES RUBBER COMPANY

SERVING THROUGH SCIENCE



## "BETTY JO" LANDS ON U. S. ROYALS!



*One of the 10-ply U. S. Royal Nylon Tires which brought the "Betty Jo" to a smooth, safe stop.*

Landing at La Guardia after a fourteen and a half hour flight of nearly 5,000 miles... setting a new performance record for fighter planes... the "Betty Jo", P-82 North American Twin Mustang, rolls smoothly to a stop on the U. S. Royal Nylon Tires which safely supported her 14 ton take-off from Hickam Field.



6600 EAST JEFFERSON AVENUE  
DETROIT 32, MICHIGAN



5675 EAST ANAHEIM TELEGRAPH ROAD  
LOS ANGELES 22, CALIF.



# Opposition Forms Quickly To WAL-UAL Route Deal

## Early Hearing on Proposed Sale Foreseen; Interest Keen

No time has been lost in getting CAB's machinery rolling toward a decision on Western Air Lines' agreement to sell its Denver-Los Angeles route, plus equipment and facilities, to United Air Lines. A pre-hearing conference to line up the legal and other issues in the case has already been held, and lawyers for Western and United plus a number of other interested airlines are already at work shaping the cases they will present at a forthcoming hearing.

The pre-hearing conference reached no agreement on just when the case is to be heard, but best guesses place the date within 30-60 days. CAB has assigned one of its top examiners, Thomas L. Wrenn, to handle the processing.

It surprised no one to learn at the conference that other airlines will fight the transfer of Route 68 to United. Transcontinental & Western Air will be one of the most determined opponents. So will Northwest. Continental Air Lines is interested in the deal because of the possibility of a Continental-Western merger. Pan American asked to intervene because of the bearing of Route 68 in PAA's application for domestic routes and on the competitive situation between the U.S. and Hawaii. (Western is now the neutral carrier feeding traffic to the Hawaii services).

Northwest's attorney Seth W. Richardson urged the Board to investigate Western's financial condition and route structure before approving the route sale. Referring to the agreement as "certificate peddling," Richardson said he thought the entire industry had a close and vital interest in what CAB's decision would be. Northwest is also interested in what is to be done with the Inland system, now practically a part of Western, and with Western's Great Falls-Seattle route application.

### Chicago-L. A. Interests American

Howard C. Westwood, speaking for American Airlines, took no stand for or against the proposal. He said American was interested in the purchase price of the route and equipment, and raised the question of what CAB's course should be in the case of an airline that has overextended itself. AAL's specific interest, Westwood said, lay in the Chicago-Los Angeles operation United would have if it acquired Route 68.

Sharpest opposition came from TWA whose attorney George Spater, de-

clared the route sale was completely inconsistent with the position WAL took two years ago in proving it should have the Denver-Los Angeles route. TWA plans to ask CAB to reopen the original route case for rehearing, reargument and reconsideration in the light of later developments. Failing that, TWA will try to have its own applications for a Denver-Los Angeles route heard along with the Route 68 sale agreement. United's attorney, J. Francis Reilly, said United would want its Denver-Los Angeles application consolidated also if any new route applications should be heard in the proceeding.

Public Counsel James Highsaw indicated his view of the major issues in the case included such questions as the reasonableness of the purchase price and whether the transfer of Route 68 to United is in the public interest. Western and United agreed with Highsaw's statement of issues.

Meanwhile the actual sale agreement filed with CAB gave details of the transaction not hitherto disclosed.

As part of the deal, United has lent Western \$1,000,000 in cash to apply on the sale price if the agreement is approved by CAB. Western has executed a promissory note payable Sept. 1, 1947, and secured by a chattel mortgage, for the loan. If the agreement is not okayed, the loan will bear 3% interest from the date of disapproval.

Sale price for the route and equipment, first reported as "approximately \$4,000,000" is actually \$3,750,000. Terrell C. Drinkwater, WAL president, said an itemized list of physical properties to be transferred with the route certificate will be filed with CAB very soon.

Both airlines joined in asking CAB to write into the certificate, if it is sold to UAL, a prohibition against hauling local Los Angeles-Las Vegas traffic. By an amendment, the application asks to have Route 68 incorporated with United's transcontinental Route 1.

### UAL Assumes WAL's Commitment

United has taken over Western's commitment with the Douglas Aircraft Co. for the purchase of five DC-6's. Four of Western's DC-4's will go to United along with the route transfer.

The DC-6's were originally ordered by Western for the Denver-Los Angeles and Los Angeles-Mexico City routes. The order was cut to five ships when load factors began to shrink last fall and it became clear that the Mexico City segment wouldn't be opened for some time. Western

views the DC-6 as too expensive for its regional type operations.

Western is continuing its order for 10 Convair 240's and will use the new Consolidated-Vultee twin-engined 40-passenger transports on its Los Angeles-Francisco and Los Angeles-Salt Lake City routes.

## N. Y.-Chicago Busiest Airline Route in U. S.

The New York-Chicago air route, flown by four carriers, was the most heavily-traveled in the country in September, 1946, according to a new traffic study made by the Civil Aeronautics Board. It was the first such study made by the Board since 1940.

CAB officials explained that the study is of traffic flow, not just originating and terminating business. In other words, figures include traffic that passed through Chicago for other points and also traffic between intermediate points on the New York-Chicago route.

Last September, 100,092 passengers

### 10 Leading Routes

The Civil Aeronautics Board's latest traffic survey, for the month of September, 1946, showed that the 10 leading U. S. domestic airline routes, based on revenue passenger-miles generated, were as follows:

Airline	Route	Rev. Pass. Miles
United	1	73,004,594
TWA	2	50,142,178
Northwest	3	42,849,391
American	4	39,752,328
American	23	37,377,913
Eastern	5	31,872,360
Eastern	6	28,540,027
American	7	26,912,850
United	11	25,542,463
PCA	14	17,473,171

United's 1, TWA's 2, Northwest's 3, and American's 4 and 23 combined, are transcontinental routes. Eastern's 5 and 6 connect Boston, New York and Detroit with Miami, New Orleans and Texas points. American's 7 is New York-Chicago via intermediate points; United's 11 is Seattle-San Diego, and PCA's 14 is Norfolk-Chicago.

flew New York-Chicago (both directions). Of these, American Airlines carried 35,717; United Air Lines, 28,999; Pennsylvania-Central, 25,505; and TWA, 9,871. CAB figures include only TWA's Route 44, in order to exclude traffic by-passing Chicago on Route 2, its transcontinental.

Second was New York-Washington, with 90,833 passengers being divided 46,081 for American, 44,752 for Eastern Air Lines. New York-Boston was third with 86,843, divided 43,109 American, 31,655 Northeast Airlines, and 12,079 Eastern. Other seven routes in the first 10 were Chicago-Detroit, Cleveland-Akron, Los Angeles-San Francisco, Akron-Youngstown, Detroit-Cleveland, Youngstown-Pittsburgh, and Jacksonville-Miami.



## Formal Action on New TWA Board, Officers Scheduled for April 24

The often-turbulent TWA situation was quiet last week, and major developments were not expected until Apr. 24, when the annual stockholders meeting will pass on a 14-man board of directors proposed by Hughes Tool Co., and officers will be elected for the coming year.

Considered significant was the fact that Paul E. Richter, TWA's executive vice president, was among directors proposed by the Hughes interests, which control TWA, and there were reports that he had been offered the presidency of the company. Richter, who recently returned from an extended vacation, had given no indication whether he would accept, if approached.

The 14-man board proposed by Hughes contained all but three members of the board as it was composed before the recent refinancing in which Hughes made the airline a \$10,000,000 convertible loan. Only ones missing were T. B. Wilson, who resigned as board chairman; Jack Frye, who said he would not stand for reelection as president or board member, and E. Lee Talman, who resigned as senior vice president. John Collings, vice president-transportation, was nominated.

In addition to Richter and Collings, Hughes nominated the following from the old board: LaMotte T. Cohu, chairman of the board and general manager of Northrop Aircraft Inc.; Powell Crosley Jr., president of Crosley Motors Inc.; Warren Lee Pierson, president of American Cable and Radio Corp.; Gilbert H. Scribner, senior partner of Winston and Co., Chicago, and N. S. Talbott, president of Talbott Corp., Dayton.

New members proposed by Hughes were: Noah Dietrich, executive vice president, Hughes Tool Co.; Palmer Bradley, senior partner of the law firm of Andrews Kurth-Campbell and Bradley, Houston, Tex.; Oscar F. Holcombe, mayor of Houston; A. V. Leslie, assistant to Dietrich; A. D. Simpson, president of the Houston National Bank of Commerce, and Lloyd Wright, member of the Los Angeles law firm of Wright and Millikan.

Following the refinancing, the TWA board was increased to 24 members, giving Hughes control. Dietrich, Bradley, Holcombe, Leslie, Simpson and Wright served on the enlarged board.

### Gardner Forms Consultant Firm

George E. Gardner, who recently resigned as executive vice president of National Airlines, has established an aviation consultant firm, George E. Gardner and Associates, with offices in the Aviation Bldg., 3240 N. W. 27th Avenue, Miami 37, Fla. Gardner will serve as a consultant for National and as a member of its board of directors.



**Makes Initial Test Flight**—The Convair 240, which made its first test flight March 16, is shown moving along the runway in a preliminary taxi run at Lindbergh Field, San Diego. The craft remained aloft for one hour and 56 minutes. The 40-passenger transport is on order for seven airlines, with first deliveries scheduled for June.

### Airline Rate Problems

## TWA Asks Mail Pay Boost for Domestic, International Service

Transcontinental & Western Air has joined the ranks of the airlines asking CAB for higher mail pay rates. Two TWA petitions request increases for both domestic and international operators.

Domestically, TWA asked a rate of 30c per airplane mile for a 300 lb. base load with excess payable at 0.03 mill per pound per mile. TWA is now paid 45c per ton mile for domestic mail service—the standard "service" rate paid the "Big Four" carriers.

For its international operations TWA wants a rate of \$1.00 per revenue mile in place of the 75c per ton mile rate now in effect. The petition said that 75c is a totally inadequate rate.

The two petitions listed the Constellation grounding and the pilots' strike of last fall as the primary causes for TWA's current financial difficulties. Additional mail pay is needed to make up recent serious losses, the company claims. Expedited action was asked on both petitions.

The Board itself has also been busy on the airlines' mail rate problems. Mail rate orders affecting Colonial and Northeast were issued simultaneously with the opening of the Board's investigations of those two airlines.

Northeast was given a temporary mail rate of 25c per airplane mile, without reference to base mileage or poundage for the period between May 1, 1945 and Feb. 28, 1947. After March 1, 1947, the rate is to be figured on a base mileage of 11,049 designated daily miles and a base load of 300 lbs. of mail. Excess poundage is to be paid at a rate of 0.03 cent per airplane mile for each pound of excess. The proceeding remains open for later determination of a final mail rate.

#### 20c Temporary Rate for Colonial

In the case of Colonial, the Board issued a show-cause order proposing

a temporary rate of 20c per airplane mile for its operations over Routes 71, 71-F, 72, and 72-F. Colonial had requested a system rate of 45c per airplane mile plus an allowance for reasonable profit.

The suggested 20c rate is to be paid without references to base mileage or poundage for the period between April 15, 1946, and Feb. 28, 1947. From March 1, 1947, the 20c rate will be computed on a daily designated mileage of 12,000 miles and on a 300 lb. base load. Excess poundage would be taken care of at the usual 0.03 cent per pound per mile rate.

#### Agrees to Proposed Rate

Colonial has notified CAB that it will not object to the 20c proposed rate, and an order making it effective will be issued soon. As is customary, the rate proceeding will remain open for setting final rates later on.

Chicago and Southern informed the Board that it would not object to a mail rate of 95c per airplane mile for its New Orleans-Havana route. The 95c rate was suggested by CAB in a show cause order issued early last month. As in the case of Colonial, a Board order making the rate effective will be issued shortly.

A hearing on an emergency rate for Western Air Lines has been held by CAB Examiner Frank A. Law, Jr. Western is asking 25c per airplane mile instead of the 0.3 mill per pound mile rate now in effect.

Temporary rates for two certificated feederlines have also been set by the Board. For the operations of West Coast Airlines, Inc., over Route 77 in Washington and Oregon, a temporary rate of 35c per airplane mile will apply. It will be computed on the basis of an average designated daily mail mileage of 3,480 after service is begun on the entire route. A final rate will be issued after more experience and operating data have accumulated.

The same rate—35c per airplane mile—was also established for Southwest Airways Company's Route 76. It will be figured on the basis of a 4,724 daily designated mileage, and will be replaced later by a final rate.



## Air Freight Pact Given Temporary Approval

Temporary approval of the consolidated air tariff agreement reached by 13 domestic airlines has been granted by CAB. The approval extends through the period during which the agreement is under formal investigation by the Board.

CAB Member Josh Lee dissented from the majority of the Board. He opposed granting temporary approval of the agreement on the theory that it represented a degree of pre-judgment of the merits of the agreement. He also said that temporary approval was unfair to the carriers because it will lead them to undertake activities that may be wholly useless if the agreement is later disapproved.

## Detroit-Washington for NWA Recommended by Examiner

Extension of Northwest Airlines' Route 3 from Detroit to Washington via Cleveland and Pittsburgh has been recommended by CAB Examiner Edward T. Stodola. He suggested that service east of Milwaukee be restricted to flights beginning or terminating at Milwaukee or points west, a restriction designed to prevent undue diversion from Pennsylvania-Central Airlines' Route 14.

For PCA, the examiner urged inclusion of Toledo, O., on Route 14. He also asked removal of a restriction that now prevents United Air Lines from serving Detroit and Cleveland on the same flight over Route 1.

Stodola pointed out that Northwest is now the only transcontinental carrier without Washington entry. He recommended denial of applications of TWA, Eastern, National, and Colonial for Washington-Detroit service.

## Airline Head Explains Executive 'Shortage'

Is there a shortage of junior executives capable of assuming responsibilities in the air transport industry?

In the Feb. 15 *American Aviation*, a trend was published to the effect that one airline president was complaining that despite the ease of hiring people these days, there is still an acute shortage of good, sound and reliable junior and department executives who can assume top responsibilities.

A flood of letters resulted, all of the inquirers wanting to know the name of the airline president. Each of the letter-writers thought he had the qualifications for junior executive jobs.

*American Aviation* was unable to divulge the name of the particular president, since the comment had been made privately, but it did write to the president and ask for an expansion of his views. Here is his reply:

"I am still of the opinion that it is difficult to find good, sound, stable junior executives whom you can depend on, and who will stay with you through thick and thin, until they reach the point where they are able to take over real responsibilities and make important decisions correctly on their own initiative.

"I have talked with many young men who were anxious to get into the air transportation business and who were willing to start at any position without regard to compensation. We have started many of them in various classifications, such as cleaners, junior mechanics, baggage handlers, ticket sellers, station agents, clerks, etc., at a salary range from \$150 to \$250 per month, depending on their age, experience, and family responsibilities.

"About 19 out of 20 last a few weeks,

and then look elsewhere for a job with higher starting salaries, but without future possibilities. They don't seem to have the interest necessary to hang on and make a real niche for themselves in the air transportation industry.

"Many of them go to driving milk wagons, ice wagons, and taxicabs, and I suppose they make considerably more in that type of work to start with than they do with an airline, but after 20 years as a milk wagon driver, their income is little more than it was when they started. If they remained in the airline business, and had ability, they should go far in 20 years.

"It is hard, of course, to sell this to a young man 20 to 25 years old. All of the men who have been with our airline 10 years or more have excellent jobs and their future is assured. Many of those who left in earlier years for more money have died on the vine, so to speak, and would like to get back.

"The qualifications we are seeking are relatively simple.

"First we want young men who have good judgment, and I might add, good judgment is difficult to find.

"Second, we want men who are willing to fight it out with us over a period of years, and not for a few months. We can't advance a man in six months' time from a \$150 a month job to a \$1500 a month job.

"Third, the man must be honest, loyal and industrious, and be a capitalist at heart. The man we want will make himself indispensable.

"The average person seeking a position today wants to do as little work as possible for the most money. I suppose that is a natural inclination, but I doubt if it will bring success."

## Summary of Domestic Airline Traffic Results for January

(Compiled by American Aviation Publications from Official CAB Reports)

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGERS MILES *	AVAILABLE SEAT MILES *	PASSENGERS LOAD FACTOR	MAIL TON-MILES	EXPENSE TON-MILES	FREIGHT TON-MILES	TOTAL TON-MILES	TRAFFIC TON-MILES	AVAILABLE TON-MILES	% AVAILABLE TON-MILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED	TOTAL PLANS **
All American	159,569	91,002,000	144,323,000	63.1%	595,816	396,724	545,035	10,730,686	20,017,764	4,616,155	5,441,360	163,296	83.1%	13	
American	39,638	14,202,000	23,293,000	60.7%	63,784	62,704	13,350	1,570,703	2,370,842	835,290	919,529	90.3%	30		
Brantiff	5,206	325,000	904,000	35.9%	388	546	546	27,224	81,098	35,474	35,524	99.9%	3		
Caribbean G & S	15,315	6,097,000	11,805,000	51.7%	27,694	41,551	10,179	693,880	1,449,234	47.9%	461,520	602,647	77.6%	18	
Colonial	7,646	2,209,000	3,857,000	57.3%	5,703	3,240	231,890	409,323	56.7%	197,902	294,794	66.3%	17		
Continental	11,965	4,091,000	7,914,000	51.7%	15,681	7,601	8,740	445,027	888,683	90.1%	384,336	409,014	93.1%	12	
Delta	30,588	15,424,000	34,823,000	63.4%	58,384	58,387	27,200	1,656,510	3,742,417	44.3%	830,381	1,088,533	75.6%	24	
Eastern	106,333	65,428,000	100,658,000	65.0%	270,513	268,989	69,945	7,457,630	15,415,276	48.1%	3,243,810	4,107,556	77.5%	73	
Hawaiian	22,573	3,093,000	3,999,000	77.3%	3,208	8,658	34,235	312,821	526,973	59.4%	193,380	167,800	98.1%	9	
Inland	6,398	1,547,000	3,025,000	51.1%	5,653	1,728	490	163,436	326,512	50.1%	144,788	156,638	92.5%	13	
NCA	16,356	4,872,000	7,524,000	63.9%	16,519	9,923	1,282	518,509	818,040	63.4%	378,575	412,641	91.7%	12	
National	24,356	14,315,000	21,220,000	67.5%	56,687	17,874	44,252	1,596,703	3,156,971	50.6%	767,902	945,710	77.3%	18	
Northeast	18,909	3,629,000	8,377,000	41.1%	3,625	7,770	316,911	1,336,642	23.7%	270,176	400,337	66.6%	14		
Northwest	40,991	23,061,000	45,444,000	50.8%	194,323	120,999	40,379	2,603,445	5,486,416	47.5%	1,650,356	1,862,732	88.2%	41	
PCA	63,104	15,521,000	38,230,000	40.6%	61,022	169,878	90,441	1,721,864	4,696,485	36.7%	1,168,126	1,572,045	73.8%	94	
TWA	54,683	4,845,000	7,446,000	59.7%	571,782	429,572	207,282	5,947,436	9,531,631	58.2%	3,149,014	3,523,675	83.8%	88	
United	102,444	64,871,000	96,500,000	67.2%	677,166	449,242	491,383	7,967,071	14,431,703	55.2%	4,037,277	5,034,178	79.5%	109	
Western	32,584	12,760,000	24,545,000	51.3%	62,043	37,236	24,970	1,411,608	2,813,581	50.2%	662,784	747,994	88.2%	26	
TOTALS	756,678	386,292,000	640,447,000	60.3%	2,693,725	2,110,149	1,609,709	44,978,198	87,519,261	51.4%	23,192,900	27,887,563	81.1%	711	

\* Figures in this column are reported in even thousands.  
\*\* Plans are as of Dec. 31, 1946. Acquisitions and retirements are reported only quarterly.

\* Figures in this column are reported in even thousands.

\*\* Planes are as of Dec. 31, 1946. Acquisitions and retirements are reported only quarterly.



## Four New Airlines Urged in Middle Atlantic Area Case

The long-awaited examiners' report in the Middle Atlantic Area Case has been issued, carrying recommendations for numerous modifications of the routes of existing airlines, and proposing the certification of four new airlines. The report was written by CAB Examiners Charles J. Frederick and Joseph L. Fitzmaurice.

All American Aviation was recommended for a certificate to allow mail, passenger and property operations between New York-Newark and Cleveland and between Buffalo and Pittsburgh. The company's requests for extensions of its present air mail pick-up system were rejected.

Atlantic Airlines was suggested for a five-year certificate authorizing passenger and cargo service on three routes between Newark and Washington, four routes between Atlantic City and Pittsburgh, and over four routes linking Newark and Pittsburgh. Numerous intermediate points are listed and non-stop privileges on some segments are proposed. Atlantic is an uncertificated carrier headed by Samuel J. Solomon, former president and chairman of the board of Northeast Airlines.

The examiners suggested that Colonial Airlines' Route 71 be changed to allow flights into New York-Newark from the present intermediate stops of Baltimore and Reading, Pa., thus providing a New York-Washington service.

Addition of Wilmington and Trenton to Eastern Air Lines' Routes 5 and 6 was recommended in the report. The examiners also proposed to extend Eastern's Route 6 from Roanoke to Akron subject to certain limitations.

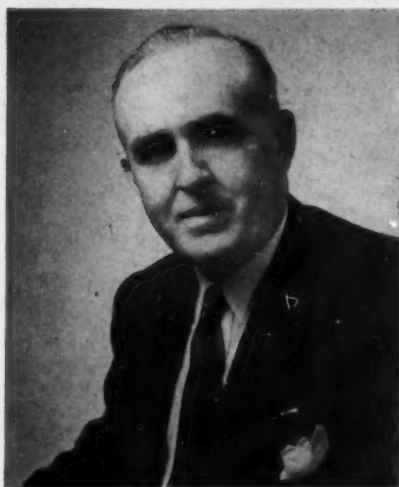
Iroquois Airlines, Inc., was selected for a three-year certificate to provide service between Albany, N. Y., and Niagara Falls over three different routings.

### Maryland-Delaware Service

To provide local service in the Maryland-Delaware area, the examiners asked for certification of Maryland Airlines, Inc., of Easton, Md. Suggested routes would link Washington, Baltimore and Wilmington, Del., with Rehoboth Beach, Del., Ocean City, Md., and other points on the Eastern Shore of Maryland and Delaware.

For Pennsylvania-Central Airlines, the report called for an extension of Route 55 from Williamsport, Pa., to Philadelphia, plus permanent inclusion of Morgantown and Clarksburg, W. Va., as intermediate points.

Robinson Aviation, Inc., of Ithaca, N. Y., was chosen for a three-year certificate to provide service on routes between New York-Newark-Teterboro, N. J., and Buffalo and Albany,



**Surveys TWA Route—**Maurice E. Sheahan, former director of budgets and methods of Trans-World Airlines' international division,

is now in the Far East surveying the Bombay-Shanghai route which TWA intends to open up this year to complete its international system. Sheahan played a prominent role in the war in China and other Far East areas, has had a wide experience in all forms of transportation.

via various intermediate stops.

Recommended changes for Transcontinental & Western Air's Route 2 included addition of Johnstown, Pa., and Worcester, Mass., as new intermediate points.

The report also asked that United Air Lines be authorized to serve Wilmington, Trenton and Hartford on various segments of Route 1.

## Decision Postponed On TWA Route Sale

Postponement of decision on the proposed sale of Transcontinental & Western Air's Route 38 to Arizona Airways has been announced in an opinion by the Civil Aeronautics Board. The Board said it would reconsider the sale proposal after new route applications pending in the Arizona-New Mexico area case (Docket 968 et al) had been decided.

The Board's opinion was somewhat unusual. It appeared to be sharply critical of the proposed sale price of Route 38 (Phoenix, Ariz., to Las Vegas, Nev., via Prescott and Kingman, Ariz., and Boulder City, Nev.—279 miles); but at the same time virtually invited TWA and Arizona Airways to consider the same deal at a lower price and present it again for later CAB approval.

Route 38, according to the opinion, is a thin route which operated at a loss in the past. (At present it is not being flown). In return for the certificate, TWA is to receive \$100,000 worth of Arizona Airways' stock. This the Board found is equivalent to a purchase price of \$100,000.

## —CAB Briefs—

Formal hearing on the interlocking relationship resulting from LaMotte T. Cohu holding positions as director of TWA and as chairman of the board and general manager of Northrop Aircraft, Inc., has been ordered by CAB. Hearing was requested by Cohu and TWA after CAB Chairman James M. Landis had indicated that Northrop's entry into the commercial aircraft field made a re-appraisal of the relationship advisable. The Cohu-TWA relationship had originally been approved in 1940 when Northrop handled military business only.

United Air Lines has been authorized to serve Twin Falls, Idaho, on its Route 1 through use of Gooding Municipal Airport. Twin Falls' airport is inadequate for DC-3 service and plans for a new field will not be completed for a year or more. Gooding is 39 miles from Twin Falls.

CAB has removed the three-year limitation from the authorization for that portion of Continental Air Lines' Route 29 from Hobbs, N. M., to San Antonio, Tex., via Midland, Big Spring, and San Angelo. CAL's certificate was also amended to designate Midland-Odessa (to be served through Midland Army airfield) as an intermediate point in lieu of Midland.

TWA and Noah Dietrich, executive v.p. of the Hughes Tool Co. have applied jointly for approval of interlocking relationships growing from the fact that Dietrich is an officer and director of Hughes Tool, as well as a director of TWA. Hughes Tool Co., through its control of TWA, is legally a person controlling an air carrier. Dietrich disclosed he had received \$110,000 last year for his services to Hughes Tool Co., and expects a like sum annually "during the continuance of the interlocking relationships." He will receive no compensation for serving on TWA's board.

### Pan Am Gets Safety Award


Pan American Airways has received the 1946 safety award from the Inter-American Safety Council in recognition of a year's operation without flight accident or fatality to passenger or crew.

The Council makes annual awards of certificates to United States and foreign airlines completing a calendar year without flight accident or fatality to passengers or crews. The awards, part of a program started 12 years ago, are designed to improve safety standards in airline operation.

### EAL, NAL Drop Differences

Following the 10% passenger fare increase agreement reached by 16 airlines (page 13), Eastern Air Lines and National dropped their differences which had resulted from passenger fare adjustments made by each line. Eastern withdrew its proposal for a 10% round trip discount, and National agreed to withdraw the complaint it filed against Eastern about the discount proposal. Both companies are now parties to the flat 10% increase agreement.





# Honeywell Engineering *in the air*

ONE for research, the other for demonstration — together these Honeywell planes represent an engineering service prepared to apply automatic control to individual aeronautic requirements.

Already widely separated applications of automatic control have furnished the answer to important achievements in the air. And to meet the varying needs of every control problem, Honeywell's engineering service includes not only the facilities for new developments but a background of experience in all fields of automatic control. Most important, Honeywell has demonstrated the capacity to apply this experience to aviation's problems.

Make full use of this highly specialized service in seeking the answers to your particular problems, no matter how complex. Write Minneapolis-Honeywell

Regulator Company, 2667 Fourth Avenue South, Minneapolis 8, Minn. In Canada: Toronto 12, Ontario.



Special equipment for recording test data in flight. Six continuous control functions, such as forces applied to control surfaces and data on automatic approach patterns, are obtained. This is one of many items of special test equipment devised by Honeywell engineers for our engineering aircraft.

**CREATIVE ENGINEERING**

MINNEAPOLIS  
**Honeywell**  
AERONAUTICAL CONTROLS



MAKERS OF THE FAMOUS M-H ELECTRONIC AUTOPILOT, STANDARD ON ALL AAF 4-ENGINED BOMBERS



Over the years...the world over



1930



General's High Pressure Airplane Tire of 1930 was introduced in the year when commercial airlines in the United States flew 31,992,634 air miles, carried 374,935 passengers and covered the New York-Chicago trip in 6 hours, 15 minutes.

### ***A new General..specifically engineered***

Here is an aviation tire development of tremendous significance to operators of the DC-4 and DC-6... a new General engineered *specifically* for these outstanding ships... another milestone in General's long list of "Safety Firsts" for transport service.

Each part of this new General Tire is compounded to work in scientifically balanced harmony with every other part. It is designed to take impact as a unit, without undue strain at any one point. In addition, this improved tire has impact cushioned shoulders, protected

*Known 'round the World for*



# Safer Flying with **GENERALS**



The newest General Aviation Tire enters the field following commercial aviation's greatest year. In 1946, American commercial airlines flew 328,644,764 air miles, carried 12,144,836 passengers. The New York-Chicago flight time is now 3 hours, 10 minutes.

## to increase DC-4 and DC-6 Safety

against shoulder separation; a stronger, safer rayon cord body with shock absorber construction that cushions landing blows and unites tread, carcass and bead in one inseparable unit; and dual bead construction for extra strength at the rim.

Above all, this new General meets the demand of commercial airline operators for a tire combining *maximum safety* and service with *low operating costs*.

Aviation Division **THE GENERAL TIRE & RUBBER CO.**  
Akron, Ohio



  
**GENERAL**  
**AIRPLANE TIRE**

*Quality and Safety*



# War Assets Administration **SURPLUS**

Hundreds of other items, in addition to those listed, are available for immediate delivery at comparably low prices. Send for catalog.

## GENERATORS

			Net
Type O-1	Leece-Neville	100 Amp., 24V P/N S22600	\$112.50
Type O-1	Leece-Neville	100 Amp., 24V P/N S22602	112.50
Type M-2	Leece-Neville	50 Amp., 24V P/N S24225	112.50
Type O-1	Leece-Neville	100 Amp., 24V P/N S24250	112.50
Type E-7A	Leece-Neville	50 Amp., 12V P/N 24500	56.25
Type L-3	Leece-Neville	25 Amp., 24V P/N S24504	112.50
Type M-2	Eclipse	50 Amp., 24V P/N 718-1-A	112.50
Type O-4	Eclipse	100 Amp., 24V P/N 128250-901-9	112.50

## STARTERS

			Net
Type JH3R	Jack & Heintz	24 Volt P/N 280R3	\$150.00
Type JH5LR	Jack & Heintz	24 Volt P/N 1760R3	247.50
Type H-6	Eclipse	12 Volt P/N 444-4F	168.75
Type J-1	Eclipse	24 Volt P/N 756-21B	97.50
Type G-6	Eclipse	24 Volt P/N 915-4F	168.75

## MAGNETOS

			Net
Type SF14LUT	American Bosch	P/N MJN-14K-301-R1830 Engine	\$112.50
Type SF14LUS	American Bosch	P/N MJN-14K-307-R1830 Engine	112.50
Type SB9RN	Scintilla	P/N 2-953-3-R-985 & R1340 Engine	75.00
Type DFN	Scintilla	P/N 10-8038-15 Lycorning R-680 Engine	75.00
Type SF14LN-3	Scintilla	P/N 10-15364-21-R1830 Engine	112.50
Type SF9LN4	Scintilla	P/N 10-20700-1-R1820 Engine	112.50
Type VMN7DF5	Scintilla	P/N 10-21819-2-R755-830-915	56.25

## PROPELLERS

			Net
Hamilton Standard Propeller Assembly		P/N 23E50-473-6477AO	\$899.50
Hamilton Standard Propeller Assembly		P/N 2D-30-233-6101A-12	420.00

## BLADES

			Net
Hamilton Standard Blade Assembly		P/N 6339A-12	\$225.00
Hamilton Standard Blade Assembly		P/N 6353A-12	225.00
Hamilton Standard Blade Assembly		P/N 6353A-18	225.00
Hamilton Standard Blade Assembly		P/N 6477AO	112.50
Hamilton Standard Blade Assembly		P/N 6507A-O	262.50

## GOVERNORS

			Net
Hamilton Standard Governor Assembly		P/N 1A2G5	\$150.00
Hamilton Standard Governor Assembly		P/N 1A4G5	150.00
Hamilton Standard Governor Assembly		P/N 1M12G	75.00
Hamilton Standard Governor Assembly		P/N 4G8G23D1	150.00
Hamilton Standard Governor Assembly		P/N 4G8G23G1	180.00
Hamilton Standard Governor Assembly		P/N 4K11GOJ	150.00

## IGNITION HARNESS

			Net
Breeze	Manifold Assembly	P/N E-1028-67-10	\$48.15
Breeze	Manifold Assembly—R1820	P/N E-667-4P-AN	75.00
Breeze	Ignition Assembly—R975-11	P/N E-616-4P-AN	25.50

## IGNITION HARNESS (Cont.)

			Net
Titeflex	Manifold—R2800	P/N 22450	\$187.50
Titeflex	Harness—R2000	P/N 22922	150.00
Titeflex	Conduit Assembly	P/N 28007; -08; -09 each	6.77

## FLIGHT INSTRUMENTS

			Net
Sperry	Gyro Horizon—Type AN5736-1A	P/N 656768	\$51.10
Jack & Heintz	Gyro Horizon—Type AN5736-1	P/N 6500-A	51.10
Jack & Heintz	Dirac. Gyro—Type AN5735-1	P/N JH5500	38.50
Pioneer	Altimeter, Sensitive 0 to 3500 ft.	P/N 1536-28-B	24.00
Kollsman	Altimeter, Sensitive	P/N 671RK01-1692	24.00
Pioneer	Compass	P/N 1818-4A	14.50
Kollsman	Pitot Tube, Type AN5816-1	P/N 309D-011	4.90
Pioneer	Airspeed, Type B-8, 20 to 200mph.	P/N 1426-21-A1	15.00
Pioneer	Rate of Climb, Type C-2, AN5825-1,	P/N 1636-6H-B1	21.00
	0 to 6,000 ft. per min.		

## NAVIGATION INSTRUMENTS

			Net
Fairchild	Sextant; Bubble type A10A		\$27.50
Link	Sextant; Bubble type A12		27.50
Astro Compass—AN5738-1			7.70
Compass—Navigation Type D-12			25.00

## ENGINE INSTRUMENTS

			Net
Fisher-Porter Flowmeter—P/N C1006 for PBY			\$49.00
Kollsman Manifold Pressure Gage—Single 611KN-02			
	Range 10 to 50 in. of mer.		14.00
Manifold Pressure Gage—Dual, AN5770-2-12			
	Range 10 to 75 in. of mer.		19.80
Manifold Pressure Gage—Dual, AN5570-1			
	Range 10 to 50 in. of mer.		11.00

## INVERTERS 75% of following Gov't. Cost

Elec. Lab. Inc.	Type S660 24V to 750V P/N AA565		\$47.50
Elec. Lab. Inc.	12 Volt P/N S659		18.00
Holtzer-Cabot Elec. Co.	Type MG149F—Rotary type		
	24V to 750V P/N 25258		77.00

## ★ ★ ★ 75% of following Gov't. Cost

Bosch	Coil Induction Vibrator 12V P/N VJR12B3		\$10.00
Bosch	Coil Induction Vibrator 24V P/N VJR24B5X		8.00
Eclipse	Solenoid starter 12V P/N 126701-1		6.94
Elec. Spec. Co.	1/4 HP Motor 24V Type HCA3 P/N 7535A		101.00
Leach Co.	Relay 24 Volt DC P/N 5058		10.00
Leach Co.	Relay 24 Volt 200 Amp. P/N 7220-24		10.48
Westinghouse	Voltage Regulator finger type		
	24V 200 Amp. P/N 12482758		30.00
Mallory & Co.	Noise Filter		15.00

Complete stock of parts for Pratt & Whitney Engines, Hamilton Standard Propellers, and American Bosch and Scintilla Magnetos. Prices quoted are typical of all items in our huge stock. Immediate delivery. Write, wire or telephone for complete catalog.

AMER-BOSCH MAGNETO PARTS 75% of following Gov't. Cost	SCINTILLA MAGNETO PARTS 75% of following Gov't. Cost	HAMILTON STANDARD PARTS 75% of following Gov't. Cost	PRATT & WHITNEY PARTS 75% of following Gov't. Cost
P/N LR528 \$ .85	P/N 10-5511Z \$ 3.21	P/N 50119 \$ 1.68	P/N 1744 \$12.67
P/N IS5231 2.20	P/N 10-7461-1 2.20	P/N 50220 10.96	P/N 9514 1.12
P/N FL5233 2.45	P/N 10-9978 1.51	P/N 50262 2.08	P/N 24073 5.88
P/N CA5243 6.75	P/N 10-12063Y 7.75	P/N 50654 4.40	P/N 24966 19.38
P/N PL52132 1.75	P/N 10-13373 3.30	P/N 50857 21.38	P/N 26485 25.60
P/N RT52143 8.75	P/N 10-15828Y 2.80	P/N 51163 38.65	P/N 32725 11.88
P/N DP52300 11.50	P/N 10-20505 5.50	P/N 52141 15.66	P/N 53260 15.73

The above items are offered subject to prior sale, F.O.B. Flushing, New York



**AUTHORIZED AGENT FOR WAR ASSETS ADMINISTRATION**

39-01 MAIN STREET, FLUSHING, L. I., N. Y. . . . Cable Address: AIRAMBROSE  
Branch Warehouse: Oakland Municipal Airport, Oakland, Calif.

Agents for Frank Ambrose Aviation (Canada) Ltd., Dorval Airport, Montreal, Canada  
and Frank Ambrose Aviation, S. A., Panama City, R. P.

Established 1923

U. S. Export License No. 191



## Loran Funds Knifed

Airlines flying the Atlantic will not have the benefit of Coast Guard Loran stations or ocean weather reporting stations if a \$36,000,000 cut in Coast Guard's 1948 budget made by the House is upheld in the Senate. Coast Guard says it will have to drop Loran, now used by all but one U. S. airline as well as some foreign lines flying the Atlantic, plus the weather ships. Only thing remaining would be routine, non-aeronautical weather reports from patrol vessels. Senate Appropriations committee was urged last week to restore the funds.

## Airline Personnel

### Administrative

Ted T. Hanna, formerly in the public relations department, has become assistant to the president of Southwest Airways.

### Traffic and Sales

Donald A. Huff, who was with Braniff Airways before the war, has been named director of express and cargo by Peruvian International Airways.

M. J. Foley, United Air Lines' district traffic and sales manager in Montreal for the past five years, has been appointed Canadian representative for the company.

Charles E. Mannschott, Jr., formerly with TWA, is Pennsylvania-Central Airlines' new manager of rates and tariffs.

John W. Ogilvie, former director of radio for the office of the Coordinator of Inter-American Affairs, has been appointed express traffic manager for Pan American Airways. He succeeds Louis Cholot, who resigned for personal reasons.

Robert P. Hubley has been promoted to supervisor of station procedures for Southwest Airways. Robert A. Stevens is now working in the company's advertising department; Robert A. Johnson is acting station manager at Los Angeles; Edward Brough is acting station manager at San Francisco, and John Howitt is sales representative in San Francisco.

Frank Wright has been promoted to district traffic manager of TWA in San Francisco. Boyd Madison leaves San Francisco to open a Seattle office for the airline.

Margaret E. Kerr has been named special representative in Northeast Airlines' sales department.

G. Lopez Vasquez has been appointed d.t.m. for TWA in Madrid. He joined the company last April, and has been serving as assistant to the district manager for Spain.

J. C. O'Connor, chief of cargo sales for UAL at Philadelphia since 1942, has been assigned to the company's expanding city sales force there. E. R. Carnahan takes over the cargo sales position.

Dick Hoving, Braniff Airways' station manager at Pueblo since July, 1943, has been promoted to Pueblo d.t.m. succeeding George Collett, named special representative for the airline with offices in Chicago.

Reginald Martine, Jr., who has been with American Airlines for seven years, has been appointed convention and congressional sales representative in Washington.

Richmond G. Terry, who joined American Airlines in 1938 as a fleet service agent, is new sales manager at Bridgeport, Conn. Most recently sales representative at Boston, he replaces Trevor A. Cushman, now sales manager at New Haven.

Miss Genevieve Gay has been named women's traffic representative for United Air Lines in Seattle.

# Airline Commentary

By ERIC BRAMLEY

WE HAD AN interesting luncheon the other day with an industry engineering official, and he was talking about the airline engineering and technical meetings that are held from time to time . . . "These technical men will sit around for hours talking about spark plugs, for example, and someone will give a lengthy discourse on settings, etc.," he said. "Maybe they'll argue. You start to wonder what in the heck they're going to accomplish, spending all that time on an insignificant little spark plug. But big improvements come out of swapping ideas like this, and after all, it's the little things that cause most of the trouble. Delayed flights, cancellations and other difficulties are often traced back to such things. So these engineers make a real contribution to elimination of delays, which in turn helps eliminate mad passengers and bad publicity" . . . The airline engineer's value should, of course, be obvious, but it's often overlooked, and we think that this particular official's comments are a nice tribute . . .

Some issues back we praised the chief porter at Newark Airport for the good job he did in taking care of some passengers (we were among them) who had been mishandled by an airline . . . R. J. Walsh, manager of the Newark Airport branch of New York Airport Terminal Inc., now writes to tell us that as a result of the piece, the chief porter was formally commended by the station managers of the airlines . . . We thank Mr. Walsh . . . We've batted the porters over the head on numerous occasions, but when one does a good job he's certainly entitled to praise . . .

Ever hear of a school for aviation secretaries? . . . Well, there is one, and Dr. Ted Lyon, president of Pittsburgh Institute of Aeronautics, told us about it the other day . . . Seems that about 1941 or 1942 the Institute (which has all sorts of courses for mechanics, etc.) decided that secretaries of aviation concerns ought to know more than just secretarial work, so a 10-month course was set up, 9 to 4 every day, at \$35 a month or \$350 for the course . . . Something like 100 girls have been graduated to date and almost all of them are with airlines, aircraft manufacturers or in some phase of aviation . . . Right now there are 22 in the day course, 11 at night . . . They take a complete and thorough secretarial course to start with, then take a few hours on a Link trainer, go through the engine and aircraft school to learn what airplanes are all about, spend hours looking at training films, study civil air regulations, meteorology, etc., and, most important, learn aviation nomenclature . . . On graduation every girl has been placed in an aviation job with starting salaries of \$160 to \$175 a month . . . But knowing aviation gives them opportunities for faster advancement . . .

We have before us two of the numerous railroad ads that appear in the daily papers . . . There's quite a contrast between them . . . One is that of the good old Boston & Maine Railroad . . . It's headed "They call me Time Table Mable, the girl who's in love with a train" . . . The poem goes on to say, in part, that the train "gets me where I want to be, through rain or fog I'm worry free," and ends up proclaiming that "whatever the weather it goes right to town" . . . If we started to cite instances of trains that didn't go "right to town," we'd have a list as long as your arm . . . The other ad is that of the Texas & Pacific Railway, graphically illustrating the dangers of grade crossing accidents and urging the driving public to be careful . . . It points out that last year 1,493 persons died in auto-train accidents at grade crossings . . . This is sane and sensible advertising . . . The BM ad, on the other hand, falls in a category that we are unable to describe in the public prints . . .

The *New Yorker* magazine had a peach of a piece in its March 15 issue on what happens to an airline when the weather socks in . . . It records the visit of Phillip W. Wrenn Jr. to American Airlines at LaGuardia Field during one of those periods when nothing was flying . . . The story mentions John D. Lewis, American's New York operations manager, who has been with the company for 17 years; W. A. Skillman, former New York flight superintendent, now Burbank flight dispatcher; Henry O'Neil, reservations manager, and Art Bordon, ticket manager . . . Recommended reading . . .

What a difference just a few percentage points in the load factor chart means . . . In a 1946 month, United Air Lines' revenue from all kinds of traffic was \$5,308,000 . . . The weight load factor that month was 60% . . . And the company figures that for every 1% increase in the load factor, revenue would have increased \$88,500 . . . Most of the increase would have gone straight through to net earnings, because expenses would have increased very little, the company points out . . . And if each of United's 14,000 employees sold one additional revenue passenger, the additional revenue would amount to \$400,000 . . . A little concentrated selling sure goes a long way.



# CAB Proceedings

(A Summary of Applications Filed, and Actions of the Civil Aeronautics Board.)

## CAB Actions

Mar. 7—Order fixing temporary mail pay rate of 35c per airplane mile for Pioneer Air Lines. Similar order also issued for Florida Airways.

Mar. 10—Decision removing restriction from Continental Air Lines' Route 29 between Hobbs, N. M., and San Antonio, Texas.

Mar. 11—Examiners report issued recommending routes in the Middle Atlantic States. (Docket 674 et al.)

Mar. 17—Examiners report in the Detroit-Washington Service Case issued. (Docket 679 et al.)

Mar. 18—Orders opening financial and operational investigations of Colonial Airlines (Docket 2852) and Northeast Airlines (Docket 2853).

Mar. 18—Order fixing temporary mail pay rate of 35c per airplane mile for the operations of West Coast Airlines, Inc., over Route 77.

Mar. 18—Order fixing temporary mail pay rate of 25c per airplane mile for the operations of Northeast Airlines.

Mar. 18—Show-cause order proposing mail pay rate of 20c per airplane mile for Colonial Airlines.

Mar. 21—Opinion denying petition of nine steamship companies for review of CAB's surface carrier policy.

Mar. 21—Order approving 16-airline agreement to increase passenger fares 10%.

Mar. 21—Show cause order directing Pan American Airways to show why its transatlantic certificate should not be amended to eliminate Bermuda as a full traffic stop.

## Calendar:

Apr. 14—Prehearing conference on applications proposing service in California (Docket 1066 et al.) 10 a. m. e. s. t., Room 1302, Temporary Building "T."

Apr. 14—Prehearing conference on applications for helicopter service in the Chicago area. (Docket 2384 et al.) 2 p. m., e. s. t., Room 1302, Temporary Building "T." Examiner Ferdinand D. Moran.

Apr. 21—Hearing on Caribbean-Atlantic Airlines' applications for Caribbean routes. (Docket 2246 et al.) Postponed from April 1. Examiner James S. Keith.

Apr. 21—Hearing on applications proposing service between the Pacific Northwest and Hawaii. (Docket 2537 et al.) 10 a. m., e. s. t., Masonic Temple, West Park and Main Street, Portland, Ore. Examiner Warren E. Baker.

May 5—Hearing on applications proposing local service in Western Washington (Docket 2368 et al.) Tentative. Examiner James S. Keith.

May 10—Hearing on applications proposing Additional Service to Florida (Docket 1668 et al.) Tentative. Examiner F. Merritt Ruhlen. Postponed from Mar. 10.

June 16—Hearing on the Minot-Regina, Sask., Application of Mid-Continent Airlines. (Docket 628). Examiner Lawrence J. Kesters. Tentative.

## Applications:

Air Cargo Co-ordinators, (Frank V. Gandola and Wm. E. Geiselman, Jr., partners) Cleveland Municipal Airport, Cleveland 32, Ohio, for a certificate authorizing air transportation as a freight forwarder over scheduled domestic lines (Docket 2812), over scheduled international lines (Docket 2813), over non-scheduled international lines (Docket 2814).

Airway Express Agency, Inc., Mass. Bonding Bldg., 130 William St., New York, N. Y., for a certificate or exemption order, authorizing air transportation as a freight forwarder over scheduled and non-scheduled domestic lines (Docket 2815), and over scheduled and non-scheduled international lines (Docket 2816).

Arcadia Air Cargo Co-ordinators, Inc., 50 Broad St., New York 4, N. Y., for a certificate authorizing air transportation as an air freight forwarder over scheduled and non-

scheduled domestic lines (Docket 2803), and over scheduled and non-scheduled international lines (Docket 2804).

Mercury Airlines, Inc., Leveque-Lincoln Tower, Columbus 15, Ohio, for a permanent or temporary certificate authorizing scheduled cargo service between Chicago, Ill., and Miami Beach, Fla., via various intermediate points, and between St. Louis, Mo. and New York, N. Y., via various intermediate points, (Docket 2793); between Toronto and Hamilton, Canada and Columbus, Ohio, via various intermediate points, and between Columbus and Havana, Cuba, via various intermediate points (Docket 2794).

National Air Freight Forwarding Corp., 100 W. Tenth St., Wilmington, Del., for a permanent or temporary certificate or an exemption order authorizing air transportation as a freight forwarder over scheduled and non-scheduled international lines. (Docket 2797).

Northeast Aviation Co., Portland Municipal Airport, Portland, Me., for a permanent or temporary certificate authorizing scheduled mail, or mail, passenger and property service by helicopters over four circle routes from Portland Municipal Airport. (Docket 2817)

Pan American Airways, Inc., for an exemption order authorizing non-stop operations omitting London, England, as a stop on its transatlantic services. (Docket 2738).

Pacific Northern Airlines and Pacific Northern Airlines, Inc., Anchorage, Alaska, for amendment to its certificate adding Gustavus, Alaska, as an intermediate point on route between Juneau and Yakutat. (Docket 2770).

Pan American Airways, Inc., for amendment to its Latin American certificate to authorize service between Caracas, Venezuela and the co-terminals Rio de Janeiro and Sao Paulo, Brazil, via Manaus and Golan, Brazil; and between Caracas and Asuncion, Paraguay, via Manaus, Golan and Guaira, Brazil. (Docket 2720).

Pennsylvania-Central Airlines Corp., for an amended certificate for Route 14 authorizing mail (as well as passenger and cargo) service to Flint, Mich., non-stop service between Chicago and Lansing, Flint and Saginaw-Bay City, Mich., and including Saginaw-Bay City as an intermediate point between Flint and Lansing. (Docket 2704).

Pennsylvania-Central Airlines Corp., for an amended certificate for Route 41 removing restriction which limits operations between Traverse City and Grand Rapids, and realigning route to include intermediate points Lansing and Muskegon and terminal points Chicago and Milwaukee. (Docket 2705).

Pennsylvania-Central Airlines Corp., for an exemption order authorizing non-stop flights between Saginaw-Bay City and Grand Rapids, Mich. (Docket 2706).

Pennsylvania-Central Airlines Corp., for a permanent and/or temporary certificate, or an amended certificate for Routes 34 and 46, authorizing scheduled passenger, property and mail service between Buffalo, N. Y. and Toronto, Canada. (Docket 2707)

Pennsylvania-Central Airlines Corp., for temporary exemption from Regulation, Serial 381, until the board renders a final decision in Docket 2259; for early hearing on Docket 2259; and for rescission of Regulation, Serial 381. (Docket 2767).

Phalanx Air Freight, Inc., 753 Bryant St., San Francisco, Calif., for a permanent or temporary certificate or an exemption order authorizing air transportation as a freight forwarder over scheduled international lines. (Docket 2740).

Putnam Airlines, 18 Truesdell St., Putnam, Conn., for a certificate authorizing scheduled passenger, property and mail service over two circle routes out of Putnam, Conn. (Docket 2757).

Railway Express Agency, Inc., for a permanent or temporary certificate or an exemption order authorizing air transportation as a

freight forwarder over the scheduled domestic lines (Docket 2744), non-scheduled domestic lines (Docket 2745), scheduled international lines (Docket 2746), and non-scheduled international lines (Docket 2747).

Rapid Air Service, (W. F. Rose, d. b. a.), 37 Forsyth St., S. W., Atlanta, Ga., for a permanent or temporary certificate authorizing air transportation as a freight forwarder over scheduled and non-scheduled domestic lines. (Docket 2806).

Richmond Airfreight Terminal, Byrd Airport, Richmond, Va., for a certificate authorizing air transportation as a freight forwarder over domestic and international lines. (Docket 2807).

S. F. Inc., Lafayette Parish Airport, Lafayette, La., for a certificate authorizing scheduled passenger, property and mail service between New Orleans and Lafayette, La. (Docket 2863)

San Francisco Overseas Corp., Financial Center Bldg., Montgomery at California, San Francisco 4, Calif., for a permanent or temporary certificate or an exemption order authorizing air transportation as a freight forwarder over scheduled domestic lines (Docket 2748), non-scheduled domestic lines (Docket 2749), scheduled international lines (Docket 2750), and non-scheduled international lines (Docket 2751).

Seaport Shipping Co., M. H. Beach d.b.a. Lewis Bldg., Portland 4, Ore., for a permanent or temporary certificate, or an exemption order, authorizing air transportation as a freight forwarder over non-scheduled domestic lines (Docket 2713) and non-scheduled international lines (Docket 2714).

Skyways Freight Forwarding Corp., 152 West 42nd St., New York 18, N. Y., for a permanent certificate authorizing air transportation as a freight forwarder over scheduled international lines (Docket 2752), and non-scheduled international lines (Docket 2753).

Stark Air Shipping, Inc., 120 Wall St., New York 5, N. Y., for a permanent or temporary certificate or an exemption order authorizing air transportation as a freight forwarder over scheduled domestic lines (Docket 2694), over non-scheduled domestic lines (Docket 2695), over scheduled international lines (Docket 2696), and over non-scheduled international lines. (Docket 2697).

Trans-Canada Air Lines, for an amendment to its foreign air carrier permit to authorize Yukon Southern Air Transport, Ltd., to operate the route from Whitehorse, Yukon Territory to Fairbanks, Alaska, on behalf of Trans-Canada Air Lines through October 3, 1947. (Docket 2675).

Transcontinental & Western Air, Inc., for an exemption order authorizing continued foreign service to Madrid, Spain, as an intermediate point between Portugal and Algeria. (Docket 2702).

Twentieth Century Air Lines, Inc., P. O. Box 302, Charlotte, N. C., for a temporary certificate authorizing scheduled passenger and property service between Charlotte, N. C. and Chicago, Ill., via various intermediate points. (Docket 2795).

Westcoast Aircraft Sales and Service, Inc., Municipal Airport, Renton, Wash., for a certificate or an exemption order authorizing air transportation as a freight forwarder in Oregon and Washington over non-scheduled domestic lines. (Docket 2798).

Westcoast Aircraft Sales and Service, Inc., Municipal Airport, Renton, Wash., for a permanent certificate or an exemption order authorizing air transportation as a freight forwarder in the states of Oregon and Washington over scheduled domestic lines. (Docket 2802)

E. W. Wiggins Airways, Inc., Metropolitan Airport, Norwood, Mass., for an exemption order authorizing passenger, property and mail service to and from Norwood, Mass. on Route 79. (Docket 2787).

Ca  
Tra  
Nor  
To  
Stru  
of Boe  
a score  
a new  
one.  
It's t  
nel by  
Bristol  
port ap  
Seattle  
six we  
spring,  
they'll  
other  
frown t  
fishing  
Pan  
cannery  
somehw  
The mo  
to dem  
it wou  
their v  
spring  
In th  
have th  
portal p  
he leav  
back i  
repres  
ing ove  
More  
work  
nated o  
therefo  
300 or  
Negot  
contract  
north,  
non-s  
operati  
Alaska  
large v  
ever, p  
a part  
As th  
ners sh  
bulk o  
uncert  
lines, f  
Americ  
banks,  
up any  
while t  
Pan  
DC-3's  
DC-4 i  
of its A  
schedul  
preted  
paring  
cannery



\*\*\*

# Carriers Expect Heavy Air Traffic to Alaskan Canneries

## Non-Certificated Operators To Get Bulk of Business

By FRED HUNTER

Strung out along the parking areas of Boeing Field, Seattle, are nearly a score of transport planes poised for a new Alaska "gold rush," an aerial one.

It's the annual movement of personnel by the fish canneries to Naknek on Bristol Bay. The canneries will transport approximately 4,000 workers from Seattle to Naknek in a period of about six weeks, starting in April, and this spring, according to present plans, they'll go by air. In addition, another 1,000 cannery workers will be flown to Cordova and other Alaskan fishing points.

Pan American started flying a few cannery workers north in 1945 and a somewhat larger number in 1946. The movement was just large enough to demonstrate to the canneries that it would be sound economics to fly their workers up to Alaska in the spring and fly them back in the fall.

In the first place, the fish canneries have their own version of portal-to-portal pay. A worker's pay starts when he leaves Seattle and ends when he is back in Seattle. An 8-hour flight represents a substantial payroll saving over an 8-day boat trip.

Moreover, a plane load of 20 to 40 workers at a time can be indoctrinated on the job more efficiently, and therefore cheaper, than a boatload of 300 or more.

### Traffic for All

Negotiations now are in progress for contracts to fly the cannery personnel north, and competition between the non-scheduled carriers that have been operating between Seattle and various Alaskan points is keen and active. The large volume of the movement, however, practically assures everybody of a part of the business.

As things look now, with the canners shopping for price contracts, the bulk of the business will go to the uncertificated carriers. Northwest Airlines, flying to Anchorage, and Pan American to Juneau enroute to Fairbanks, however, can count on filling up any otherwise unoccupied seats while the fishing season is on.

Pan American, which operates only DC-3's to Alaska, recently brought a DC-4 into Seattle for flight training of its Alaska division crews. The non-scheduled operators promptly interpreted this to mean Pan Am is preparing to offer DC-4 service to the canneries.

With the cannery movement coming up, the non-scheduled operators, who have been undercutting each other on passenger fares, have gotten together in agreement on a standard public fare of \$120 plus tax, Seattle to Anchorage. This fare coincides with that charged by Northwest Airlines for its DC-4 non-stop service.

Heretofore, there has been little uniformity of fares among the non-skeds. Some like Northern Airlines, Arnold Air Service, and Reeve Air Service have charged \$100 plus tax for a one-way ticket between Seattle and Anchorage. Another operator whittled the fare to \$80 plus tax, and still another made it \$85, including the tax in this figure.

### Strike Stimulates Air Service

Although the non-scheduled operators mix passengers and cargo freely on the northbound run, the southbound trips are almost always exclusively passengers. Going north it was cargo that brought so many operators into the picture. During the recent steamship and waterfront strikes Alaska became almost entirely dependent upon the air for supplies of all kinds. At the strike peak, 17 non-scheduled carriers flew between Seattle and Alaska carrying everything from toothpaste to whiskey.

A lot of this traffic continues to move by air, notably the whiskey which despite its weight makes profitable cargo. The other day 200 cases of Scotch were piled high on the Boeing Field apron awaiting the arrival of the plane to take it to Alaska. The young man keeping his eye on the cases figured he would profit at least \$50 a case. A good brand of Scotch brings \$20 a bottle in Alaska.

Mt. McKinley Air Service, Northern Airlines, Golden North, Rainier Air Freight Lines, Reeve Air Service, Arnold Air Service, Noel Air Service, and Ray Peterson are some of the carriers who have been operating between Seattle and Alaska with DC-3 equipment on a charter basis. Several others have been operating with less frequency.

Alaska Airlines, which is a certificated carrier in Alaska, put a Douglas DC-4 into contract freight operation between Seattle and the northwest territory and during the shipping strike period transported more than 350,000 pounds of cargo. Alaska Airlines now has a second DC-4 and is continuing its contract operations between Seattle and the north.

The contract air cargo division of American Airlines still has two of its DC-4's based in Seattle and it is ex-

pected that a third one will arrive shortly because of increased contract tonnage. At periods during the shipping strike, American had four DC-4's in Seattle. American's Alaska contracts call for plane loads of 17,500 pounds at approximately 21 cents a pound.

American's contract air cargo division has, among others, a large contract with Birch, Johnson and Lytell, big Pacific Northwest construction firm, which has huge construction contracts in Alaska and ships great quantities of material north. American's DC-4's generally make the flight up and back in the same day, making a quick turn around without return loads.

### Return Load Problem

The return load is the cargo rate problem for shipments to Alaska. If a contractor contracting with American could provide a return load he could halve his rate.

Pan American has just instituted new commodity air freight rates in the hope of generating new traffic in fish, seafoods, furs and such other commodities as Alaska might be able to ship to the states by air to build up southbound poundage. Of 473,978 pounds of express flown on Pan Am's Alaska division in 1946 almost all was northbound.

Fish and seafood rates from Ketichikan to Seattle have been reduced from 33 cents to 15 cents a pound. The rate from Juneau on the same products has been cut from 43 cents to 20 cents. The cut in the rate on furs is 24%.

\*\*\*\*\*

Trans Caribbean reports latest traffic data as follows: 4th quarter, 1946: 3,792,750 passenger miles; 131,877 miles flown; average load factor (based on last six months) 87.9%. January: 1,633,125 revenue passenger miles; 46,295 miles flown; passenger load factor 92.5%.

Slick Airways has inaugurated daily air freight service between Texas and the north and east, providing overnight delivery from Texas to New York, Philadelphia, Cleveland, Newark, Chicago, Detroit, St. Louis, and Tulsa. Pointing out that the carrier has a fleet potential of 3,000,000 ton miles per month, L. H. Avila, sales and operations manager, set a goal of 2,750,000 ton miles for month of March. In February, Slick operated 1,622,336 revenue ton miles compared with 1,388,199 in January. Load factor was 82%, highest yet for one month's operations, compared with 69% in January. Plane utilization increased from 7.6 hours daily in January to 8.8 hours for February. In its first year of operations, Slick operated more than 14,000,000 revenue ton miles.

The company will add to its general corporate fund the proceeds from a new offering consisting of 4% convertible income debentures and 167,781 common shares, par \$10. The common will be offered to present common holders at the rate of one share for each two shares held.

Maine Air Transport Co., headed by William H. Wincapaw, is operating non-scheduled service out of Rockland Municipal Airport, Rockland, Me. The company has two C-47's, one PBV-5A, one Noorduyn, one Stinson Gullwing, one twin-engined Cessna, and two Piper Cubs.



\*\*\*

# Need of Bigger Profit Margin For Dealers Cited by ATS

## Trade Discounts Lower Than With Mass Sale Products

The aircraft sales and service business will not become economically attractive until greater volume is achieved, and such volume can not be achieved until lightplanes become quieter, cheaper and more useful, Wayne Weishaar, secretary of the Aeronautical Training Society, declares in a report now being circulated among ATS members at 130 bases in 40 states.

The report is based on a four-month survey of trade discounts, unit sales and relative utility of lightplanes as compared with such lines as automobiles, motor trucks, refrigerators, vacuum cleaners and other types of appliances. The survey showed, among other things, that despite the small unit sales of aircraft, trade discounts to distributors are only a fraction of those prevailing in lines with mass sales.

"The facts are," said Weishaar, "that the distributor of a \$3,000 airplane today has a smaller profit margin and final take-home money on that transaction than the sandlot outlet for used cars makes on a six-year-old \$1,000 jalopy." He pointed out that distributors and dealers of popular lines of such items as refrigerators, radios and other home appliances share discounts of around 50% or more, while distributors and dealers in popular lightplanes share 25% or less.

With regard to sales volume, the report pointed out that fewer than 40,000 new personal aircraft were sold in the peak year of 1946, whereas in a good year like 1941 or the present one around 3,500,000 electric refrigerators are sold, and in 1941 over 3,700,000 passenger automobiles were sold.

"Thus we have to conclude that there are approximately 100 families willing, ready and able to buy automobiles and refrigerators to every family which is a prospective purchaser of an airplane," said the report. Showing how small the civil aviation business still is, Weishaar pointed out that the two largest aircraft user groups together have roundly 51,000 members, while the American Automobile Association alone has over 2,000,000.

### More Sales or Bigger Margin

Sound merchandising growth, the ATS secretary said, requires either limited sales with adequate margins or large volume with low unit profit, and aircraft distributors and dealers

now have neither. Reappraisal of the whole question of service, discounts and territories is indicated, he said, because of the need for more "economic incentive" for dealers to do an adequate service, advertising and sales promotion job.

With regard to the kind of aircraft sales volume that will result when flight becomes more of a mass proposition, Weishaar said these things are prerequisites:

1. Simpler, safe and quieter airplanes.
2. More airports, particularly near business sections of cities.
3. Cheaper airports and less expensive repair work.

The report concluded that the primary objective of the industry right now should be elimination of reduction of noise in aircraft. Cheaper airplanes and repairs can not come until volume increases, it said, and volume can not rise appreciably until there are more airports to accommodate the planes and give them increased utility. On the other hand, there can't be many more airports, particularly close-in city airports, until the public will accept them, and this the public will not do until the noise nuisance has been abated.

"One of the most hopeful things in the picture is the fact that the industry is awake to this problem and is doing worthwhile research to find the answers," said Weishaar.

## Good Potential Revenue Source Found in Night Flying Instruction

A potentially valuable source of new revenue for fixed-base operators is indicated in a recent night flying instruction experiment conducted by Ashburn Flying Service, Alexandria, Va. Taking a student with no previous flight instruction, and with no time for daytime lessons, Ashburn gave him all of his lessons at night and sent him out to solo at night.

The experiment worked so well that the student is continuing, still at night, to build up time for his private license. Considerable interest is being shown by other students who have little time during daylight and who sometimes lose their week-ends because of weather.

In order to operate the field at night without excessive lighting cost, Ashburn has installed the new prefabricated, packaged lighting system developed by American Gas Accumulator Co. This equipment, suitable for runways from 1800 to 7000 feet, can be installed and operated at moderate cost.

## NATA Appoints Public Relations Counsel, Maps Expansion Plans

Appointment of Charles H. Gale Associates, of New York, as its public relations counsel and mapping of plans for organization of additional state chapters constituted the major business at the first meeting of the executive committee of the National Aviation Trades Association. Harry Meixell, executive director, reported that 29 state chapters have formally affiliated with NATA, with 9 others in process of joining. Stressing the importance of close relationship between fixed-base operators and personal flying, he cited CAA records showing that over 60% of the country's airports are privately owned and operated or leased and operated by fixed-base operators.



**Super Service Squad**—Arriving at Love Field, Dallas, in the Lion Oil Co. Beechcraft, Passenger Jim Gray (in the door) and Pilot Buck Carter are met by men and machines of Southwest Airmotive's "super service squad" formed to serve transient aircraft. Luggage is carried to the SAC courtesy car aboard the baggage cart, while the clean-up wagon at right supplies utensils for giving the plane a free dusting, brushing and wiping-off.

Ph  
W

Poo  
Stim

Manil  
lands a  
in air  
anythin  
that the

Some  
healthy,  
no other  
much r  
been po  
airline  
dict how  
port wil  
ever re  
than be

The b  
pine rep  
tions, n  
guide t  
aviation  
the new  
Manila,  
ally bri  
mor is  
war he  
join one  
ment p  
ganize c

There  
boom, a  
sons wh  
importa

Accou  
shortage  
result o  
island s  
were al  
have be  
destroye  
plus av  
was nat  
would  
been gro

Just a  
air traffi  
carried  
1939 (P  
Philippin  
Air Exp  
Transport  
were cal  
amounte  
figure v  
has gone

But th  
too. All  
condition  
called p  
sures su  
velopme  
will be  
East, a



\*\*\*\*\*

# Philippine Carriers Flourish With U. S. Surplus Equipment

## Poor Surface Transportation Stimulates Air Travel Boom

By WAYNE W. PARRISH

Manila, P. I.—The Philippine Islands are experiencing a terrific boom in air transportation so far beyond anything in existence before the war that there is no room for comparison.

Some of this postwar boom is healthy, some of it isn't. Probably in no other area of the world has so much ready money—and big money—been poured into the starting of new airline services. It's difficult to predict how much of this new air transport will become permanent, but whatever remains will be much greater than before the war.

The boom has baffled the new Philippine republic. There were no regulations, no policy and no precedents to guide the government in handling aviation matters, but the director of the new bureau of aeronautics at Manila, Col. Jesus Villamor, is gradually bringing order out of chaos. Villamor is a veteran pilot and a great war hero who returned to Manila to join one of the airlines. The government picked him immediately to organize civil aviation.

There are good reasons for the boom, and there are also good reasons why Manila will be increasingly important as an air center.

### Poor Surface Transportation

Accounting for the boom is the acute shortage of surface transport as a result of the war. Railways, inter-island shipping, and ocean transport, were all badly disrupted. Highways have been in bad shape and bridges destroyed. With a vast amount of surplus aviation material available it was natural that new air companies would spring up. The demand has been great.

Just as an example of inter-island air traffic, only 16,209 passengers were carried by two Philippine airlines in 1939 (Philippine Aerial Taxi Co., now Philippine Air Lines; and Iloilo Negros Air Express Co., now Far Eastern Air Transport, Inc.). In 1946 over 290,000 were carried. In 1939 passenger miles amounted to 1,171,453, but in 1946 the figure was over 56,000,000. Freight has gone up 800% since 1939.

But the long-range outlook is good, too. Allowing for current abnormal conditions, the passage of the so-called parity bill by the legislature insures substantial U. S. business development in Manila. In fact Manila will be the warehouse for the Far East, a stable base from which many

### Surplus Binge

When the war ended the Philippine Islands had an abundance of surplus equipment.

Douglas C-47's have been available for from \$6,000 to \$25,000, 15% cash down.

C-54's are priced at \$90,000 to \$175,000 depending on condition.

C-46's are sold for \$15,000 in excellent condition, on down to \$10,000 for poor ones. For salvage: \$1,000 each. (Some of the buyers flew "salvage" equipment anyway.)

Pratt & Whitney 1830-90 engines, \$2,500 each. When overhaul time comes, it's cheaper to buy new surplus. Throw the used ones away!

PBY Catalinas in top condition go for \$2,000 on the average.

It'll be tough when the surplus stocks run out.

concerns will carry on business in China and other areas. Air business between Manila and such points as Shanghai, Hong Kong, Bangkok, Tokyo, Batavia, and Singapore, should be very good, not only for passengers but for certain types of cargo and mail.

Inter-island business should continue to be good even when shipping is fully re-established because of the time saved by air travel. At present, Chinese traders comprise one-third of all passengers within the islands.

Manila itself is recovering from the very severe war damage, but not recovering as rapidly as the more industrious Japanese. Manila has the easy-going ways of tropical countries and the physical rehabilitation job is very great. But Manila is bustling with activity.

### Airlines Well Financed

There are two big rival Philippine airlines, each backed by plenty of money and each with many ambitions. Each has its own airport and each is endeavoring to build up maintenance bases. These lines are PAL and FEATI.

Far Eastern Air Transport, Inc. (FEATI) has leased Grace Park Field, north of Manila. It has 30 C-47's, 2 C-54's, and 3 C-45's. For international routes it has four C-54's now being overhauled at Santa Monica. It has had a fatal accident killing 12 persons in a C-54 which resulted in temporary grounding of all FEATI operations.

President is Eugenio Lopez and operations manager is Capt. Meider. Some 23,300 shares of non-par value stock are distributed among 30 stockholders and the company operates the Far Eastern School of Aeronautics

which engages in flight training with some 14 L-4 Pipers and L-5's, all surplus. FEATI operates a big inter-island network plus international service to Shanghai, Hong Kong, Bangkok, Singapore, Rangoon, Calcutta, and across the Pacific to San Francisco.

Philippine Air Lines (PAL) is backed financially by the very wealthy A. Soriano, whose interests are quite diversified and pay off handsomely. TWA purchased a 20% interest in PAL but is currently getting out as best it can. PAL acquired a vast amount of surplus maintenance and overhaul machinery and equipment from the Navy but most of this valuable equipment will be worthless unless expert housing and care is given to it very soon. (Some valuable machine tools were in a quonset hut open to runway dust and wind when observed by this writer.)

PAL operates a fleet of 19 C-47's, using some others for cannibalization, throughout the islands, and has two C-54's on lease for international work. It has been operating to San Francisco and to Shanghai, and recently made a deal of some sort with Transocean Air Lines giving it much-needed technical and other assistance. Two DC-6's are on order.

Col. P. I. Gunn is executive vice president. Gunn has an extraordinary and legendary war record and is a hero of renown in the islands. PAL has about 1,000 employees, operates into 52 airfields (only two with surfaced runways and 23 with radio), and has completed its engine overhaul shop. It is getting six hours per day plane utilization and uses the adequate Mankati Airport outside Manila, which it recently leased. It carried 15,318 passengers last December, flew 1,578 hours, 202,418 miles and 3,333,476 passenger miles.

### Other Manila-Based Carriers

Other local and international airlines at Manila are:

Commercial Air Lines, Inc. (CALI) was formed early last year with a capital of \$500,000. It has 11 C-47's and has been doing good business flying from Manila to Shanghai, Bangkok, Calcutta, Rangoon, Saigon and Singapore. It recently formed a subsidiary, CALI Ltd., in Hong Kong, and hopes to fly freely through China, especially to Nanking, Amoy and Canton. The president is Alfonso Z. SyCip, owner of the Yek Hua Trading Corp., and the vice president running the show is Col. Curtis Lambert, ex-AAF officer. It will soon acquire 2 C-54's. It began solely as an international service but is now operating an inter-island service in competition with PAL and FEATI. It uses Mankati Airport. In January, 1947, it flew 370 domestic and 333 international hours, performing 788,882 revenue passenger miles. It carries considerable freight.

Trans-Asiatic Airlines was formed in mid-1946 with \$200,000 paid-in capital (69% of it American), and one C-47. It recently bought another C-47. President is W. Davis, age 24, formerly with



the FBI, and the vice president and chief backer is Dr. Ciriaco Santiago, owner of drug stores and cinemas. Treasurer is Wilbur R. Brucker and operations manager is W. Cederburg, both ex-AAF. It is hauling cargo to and from Bangkok, Hong Kong and Manila. In January, 1947, it flew 210 flying hours with one plane logging 271,000 passenger miles, 33,000 route miles and 8,500 ton-miles. Cargo has ranged from olive oil and textiles to Chinese liquor, chestnuts and perfume. It is forming a Siamese subsidiary with 26% government ownership to operate west and south of Bangkok.

**Cathay Pacific Airways, Ltd.**, of Hong Kong, operates weekly into Manila, as well as Hong Kong to Sydney, Macao, Singapore and Shanghai. Roy Farrell, an ex-CNAC pilot, is director, and S. H. de Kantzow is managing director. The company has five C-47's, and expects to purchase four-engined equipment soon.

**Pacific Overseas Airlines, Inc.**, a California corporation well known in the U. S., operates regular service to Manila. George Messenger is the Manila manager and POA recently formed a subsidiary in Siam of which the Siamese government owns 26%. POA is the former Consairway operation. It operated for the Air Transport Command in 1946. It is now endeavoring to get firmly established across the Pacific. Two C-54's have been allocated to the Siamese subsidiary.

**Philippine Overseas Airlines**, formerly an affiliate of POA (see above) is now 100% Philippine owned. It charters equipment from POA, and president is a Mr. L. Gonzales. It hopes to purchase a C-54 soon.

**Insular Airways Corp.**, organized by a Capt. Siegrist, ex-AAF, has purchased nine PBY Catalinas for an inter-island service. It has authorized capital of \$50,000, divided into 10,000 shares. Head office is Burke Bldg., Manila, and the base is Mankati Airport. Organized last November, it has not yet begun regular operations.

**Philippine Air Express**, organized by Messrs. Jose Tinsay and Benjamin Javellana, the former a stockholder in FEATI, now operates 2 C-47's on inter-island cargo routes.

**Pan American Airways** is, of course, well established in Manila and operates thrice-weekly to San Francisco. It will extend to Hong Kong and other points soon. It is using the military Nichols Field for the time being. Jules Ficke is head of the Manila office for PAA, and John Oppenheimer is the traffic manager. Others are William G. Shaw, operations manager; Ben Edwards, chief of maintenance; Miles Sparks, communications superintendent; Coe McKenna, supplies; Fred Dooley, airways maintenance; and Edward Madsen, accounts. PAA maintains a very excellent staff house for its personnel, with 22 suites, snack room, lounges and kitchen and dining room.

**Northwest Airlines** is just getting organized and is to start commercial flights to Manila in May. Jim Mus-

grave is senior NWA man in Manila so far, and a staff house, similar to PAA's, is being fitted up.

There are other companies in the making in Manila. Robert Morgan, ex-assistant manager of FEATI, and Finley Gibb, a Manila attorney, have purchased seven PBY Catalinas to organize a new firm. In addition, CNAC of China operates to Manila, and CATC of China hopes to do so.

But most of the Philippine air operations have sprung up with surplus equipment. Maintenance facilities have been meager and surplus engines have been bought for songs instead of overhauling used ones. As long as the surplus supplies last, the planes will continue to fly. When parts get scarce and business-like management must be introduced, things won't be so happy. Only the strong, efficient and well-organized will survive. Waste of surplus equipment would be a shock to those in the States, but in the meantime the Filipinos and others are experiencing all kinds of fast transport—and a goodly part of this transport will remain permanently.

## CAA to Establish Air Navigation System In Philippine Republic

The Civil Aeronautics Administration hopes to begin work soon on a system of air navigation aids and communication facilities which it expects to turn over to the Philippine Republic on July 1, 1950, under terms of the Philippine Rehabilitation Act.

During the three years and some months that remain before the deadline, CAA is hopeful not only of completing a workable system to facilitate inter-island air traffic as well as trans-Pacific travel, but also of training sufficient native personnel to take over the system, operate and maintain it.

It is an ambitious program, and the funds allocated to the project are not nearly as ample as CAA would like, but it is believed a fairly adequate system of navigation and communication facilities can be developed through rehabilitation of military equipment left in the islands, together with some new equipment.

The CAA program in the Philippines is being carried out under provisions of the so-called Tydings Act which gave the islands their independence last July 4. The act carried authorization for an appropriation of 18 million pesos (a little over \$8,000,000) to be disbursed through the State Dept. and to be used by the CAA to establish, and to operate and maintain a system of air navigation and communication facilities in the islands until mid-1950.

The act further provided that native personnel should be brought to this country in groups of 50 for instruction in air traffic handling, aircraft communications, aircraft dispatching, and maintenance of air navigation

and communication facilities. The first such group is scheduled to register at the Civil Aeronautics base at Oklahoma City in early May.

### Money Problem

After passage of the Philippine Rehabilitation Act, the CAA sent a survey party of engineers to the islands to determine what system would be needed and what it would cost. They reported \$32,000,000 would be needed, but getting that much money was out of the question, so CAA resigned itself to providing the best system possible with the eight millions or so authorized.

There are 97 airfields or airports in the Philippines, ranging from huge facilities such as Nichols Field and Clark Field to small single-strip fields. Majority of them were built by the military during the war, and such navigation and communication facilities as are now in operation are operated by the military. There are 14 airports, however, which have towers and other facilities operated and maintained by inter-island air carriers—Philippine Air Lines and Far East Air Transport, Inc.

It is estimated by CAA that it will be necessary to establish air navigation and communication facilities at a minimum of 30 airfields in the islands.

Key points in the system will be four low-frequency omni-directional radio range stations to be located probably at Davao, at Nichols Field, just outside Manila, at Cebu or some nearby point, and at Laoag, on northern Luzon. They will cover a range of about 1,500 miles each, and thus not only facilitate inter-island air navigation but also serve as valuable aids to trans-oceanic aircraft.

The primary commercial field in the islands will be Nichols Field, which the Army has announced its intention of vacating. All trans-Pacific airliners en route to and from the Orient probably will use this field, while the other fields included in the system will be used almost entirely by inter-island and local air traffic.

Chandler B. Griggs is directing the early stages of the program for CAA, and other engineers and technicians will be sent out to the islands until, about two years hence, when it is expected the system will be completed and ready to put into operation, CAA personnel in the Philippines will number 100 or more.

## PICAO Becomes ICAO on April 4

PICAO (Provisional International Civil Aviation Organization) will go out of existence next Apr. 4, to be immediately succeeded by a permanent agency ICAO (dropping the word "Provisional").

In accordance with the terms of the Convention on International Civil Aviation drawn up at the Chicago Conference in 1944, ICAO is to "come into force" 30 days after formal ratification of the Convention by 26 nations.



## U. S. Approves PAA Service to Turkey, By-Passing Balkans

The U. S. decided to approve inauguration of the Pan American Airways certificated service through Turkey by by-passing or overflying the Balkans, it is indicated in a letter from Secretary of State George C. Marshall to Hasan Saka, Turkish Foreign Minister. The letter, dated Jan. 28, 1947, describes the service to Turkey as "vitaly important and mutually beneficial."

Implementation of the U. S.-Turkey air agreement of Feb. 12, 1946, has been postponed for almost a year because of "numerous operational difficulties," Marshall states, adding: "Although some of these difficulties are still unresolved, it was decided to inaugurate the service to Ankara without further delay by omitting stops at some of the intermediate points on the proposed route."

This and other letters from various U. S. officials were carried on the PAA inaugural flight last Jan. 28. At no point does Marshall or any other official mention any intermediate country or point by name. However, it is general knowledge that PAA has not received landing rights at Bucharest, Budapest or Belgrade. The airline is also not yet permitted to land at Vienna on commercial scheduled flights.

Although PAA's inaugural flight was scheduled to Ankara, it stopped at Istanbul (formerly Constantinople) because Etimesut Airport at Ankara was flooded. All subsequent flights have also landed at Istanbul and none so far at the Turkish capital. PAA has asked the CAB to allow temporary suspension of service to Etimesut Airport. The petition states that runways have deteriorated since the field received CAA approval for carrier use. PAA also points out that there is inadequate air traffic control and some taxi strips will not support four-engine transports.

On March 7 PAA extended its Istanbul service to Karachi, India, and has been operating scheduled service to that terminal from New York on a basis of one round trip weekly. Constellations are used and the Istanbul-Karachi hop is made non-stop—a distance of about 2600 miles. PAA is contemplating a landing and traffic break in this run at Damascus, Syria, soon after the expected signing of a bilateral air transport agreement between Syria and the U. S.

Next extension of the company's projected round-the-world service is a trans-India flight from Karachi to Calcutta.

Mexico: Aero-Transportes, S. A. (ATSA) has been reorganized with several important changes in its list of officers and

directors. There have been occasional internal disagreements on operations and financing and there was one period when most operations were suspended. ATSA has, however, reestablished regular services and has regained its former position as one of the leading carriers in northern Mexico. The airline now provides the following services: Monterrey-Torreon, daily; Monterrey-Piedras Negras (Eagle Pass), three times weekly; Monterrey-Mexico City and Monterrey-Guadalajara, each six times weekly. Present fleet consists of five Boeing 247-D's and two DC-3A's. A third DC-3A is expected soon.

New president and general manager respectively are Romulo O'Farrell, Jr. and Fred N. Ward. Other executives include: Paul Carmichael, traffic manager; Harley Jobe, operations manager; Jose Ridolfo, maintenance superintendent. Total capitalization is 1,800,000 Mex. pesos (about \$375,000). Chief stockholders are: Samuel A. Markel, 30%, M. Gomez Morin, 25% and M. L. Jenkins, 25%.

Iceland: American Overseas Airlines took over active management of Keflavik Airport, near Reykjavik, Iceland, on Mar. 15. Two days later, the airline inaugurated services to the field and beyond to Scandinavia. All AOA trips to Scandinavian points will hereafter be routed through Iceland instead of Shannon.

Iceland also figures in current PICAO discussions on financial and technical aid to small nations for the purpose of maintaining expensive air navigation aids. A special PICAO group is studying the matter of keeping a LORAN (Long Range Aid to Navigation) station in Iceland in operation.

Colombia: The Colombian Government has named Mauricio Obregon to head a special National Aviation Department to increase air safety. Four commercial airline crashes have killed 86 persons in Colombia this year. TACA de Colombia had two crashes, VIARCO and Avianca one each. The crash of a full loaded Avianca DC-4 was one of the most disastrous in civil aviation history.

France: The trans-Atlantic services of Air France are now provided by Lockheed Constellations only. DC-4's previously used on the North Atlantic have been transferred to other routes. The French company has also announced that in May or June it will extend its Far East route, now terminating at Saigon, Indo-China, on to Shanghai.

Peru: Peruvian International Airways has obtained a lease from the Connecticut State Dept. of Aeronautics for the use of Bradley Field, near Hartford, as its main northern operations base. Negotiations are underway with Aircraft Service Corp. for maintenance of the airline's DC-4's, according to Brig. Gen. Haywood S. Hansell, Jr., vice president in charge of operations.

Great Britain: Press reports from London states that British Overseas Airways Corp. plans "soon" to begin a through service between London and San Francisco, involving the first scheduled flights across the U. S. by any foreign scheduled carrier. BOAC officials confirm these plans but maintain that the proposed service figures in long-term prospects only and is many months in the future. BOAC will operate the route as an extension of its present trans-Atlantic service to New York, exercising rights granted in the U. S.-Great Britain bilateral agreements signed at Bermuda in February, 1946. The British line will not carry traffic between any U. S. Cities.

## IATA Committee Proposes Credit Plan

A world-wide air travel credit plan which would enable international airlines to sell tickets against periodic billings as well as for cash was recommended at a meeting held at Nice, France, by the Traffic Committee of the International Air Transport Association (IATA).

Other results of the meetings included: adoption of a standard waybill consignment note; submission of a new form of interline agreement to the IATA Legal Committee for review; a request to IATA headquarters to draw up a final draft of new conditions of carriage by member airlines; recommendation of a plan allowing IATA airlines to pay each other the same commission on inter-line sales which they pay to agents.

The Nice meeting asked the Traffic Conference to report by Aug. 1 on experience with experimental rates for air freight, as distinct from air express. (The Conference is the IATA agency through which Traffic Committee recommendations are applied to actual operations.)

Sixteen airlines participated, including the following U. S. companies: Northwest, United, Pan American, American Overseas and TWA.

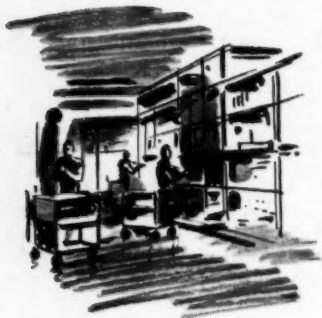
**Eight Great Southern Hosts**

- ★ THE ANSLEY  
Atlanta, Ga.
- ★ THE TUTWILER  
Birmingham, Ala.
- ★ THE JEFFERSON DAVIS  
Montgomery, Ala.
- ★ THE ST. CHARLES  
New Orleans, La.
- ★ THE SAVANNAH  
Savannah, Ga.
- ★ THE KENTUCKY  
Louisville, Ky.
- ★ THE ANDREW JACKSON  
Nashville, Tenn.
- ★ THE O. HENRY  
Greensboro, N. C.

**DINKLER HOTELS**  
Carling Dinkler, President  
Carling Dinkler Jr., Vice President



# A NEW MARKET PLACE FOR *Aircraft Components*



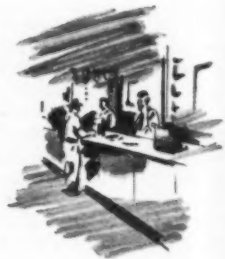
Distributors appointed by the War Assets Administration to dispose of the vast quantity of surplus have become the Mecca of alert buyers of aircraft components.

Airlines and manufacturers—foreign and domestic—are availing themselves of this opportunity to purchase needed parts and equipment at a fraction of their original cost.

Get to know these distributors—who they are—where they are—and what they sell. WAA has prepared a booklet which gives you this valuable money-saving information. It's yours for the asking—just fill out and mail the attached coupon.

For those to whom it is more convenient, WAA operates two Aircraft Components Sales Centers listed below.

**VETERANS OF WORLD WAR II** are invited to obtain certification at the nearest WAA Certification Office serving their area and to submit orders to War Assets Administration or its agents. Quantities of all merchandise are reserved to fulfill the needs of priority claimants. Priority certificates are required only when materials are in short supply.



## WAR ASSETS ADMINISTRATION

National Aircraft Components Sales Center, 6200 Riverside Drive (Municipal Airport) Cleveland 32, Ohio.

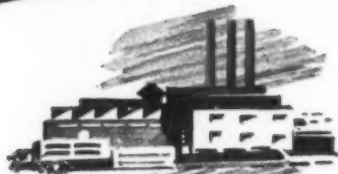
Western Aircraft Components Sales Center, 190th Street & Normandie Ave. (Alcoa Plant) Torrance, Calif.

Office of  
425 Second Street N. W., Washington 25, D. C.

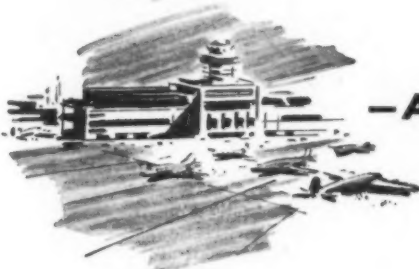
Aircraft Disposal



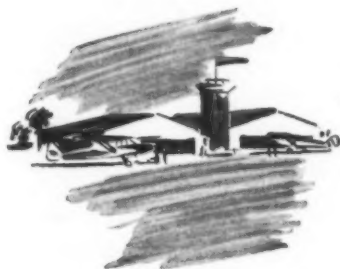
**These approved Distributors have the stocks,  
plus the "know-how", to serve particularly**



**— Manufacturers of planes and parts  
both domestic and foreign.**



**— Airline operators, scheduled, non-scheduled  
and feeder, at home and abroad.**



**— Fixed base operators, maintenance organi-  
zations and individual flyers anywhere.**

War Assets Administration . . .  
a government agency for the  
disposal of surplus property.

War Assets Administration  
Office of Aircraft Disposal  
425 Second St., N. W., Washington 25, D. C.  
Please send me the list of Authorized WAA agents.

Name .....

Street .....

City .....

State .....





# Plane Makers' Plight Causes Concern

## Financial Condition Of Firms Serious

By SCOTT HERSHEY

The financial plight of a few airlines has overshadowed the situation in which the aircraft manufacturing industry finds itself after more than a full year of peace-time operations. Yet the carriers and the manufacturers are bound by ties which make them inseparable and link them to the military in bonds which are even more binding.

Air power depends upon the correlated development of the nation's air force, its civil air commerce and transport system and its aviation manufacturing industry. The backbone of the national defense is the aircraft manufacturing industry and the aircraft manufacturing companies are facing acute financial problems.

Those who understand the situation are more than concerned over the fate of the industry. There are many well-placed persons who are genuinely alarmed. And they have reason to be when:

1. Eight out of eleven major air-frame companies for which earnings reports are available showed operating losses last year.

2. Among smaller companies profits were the exception and losses the rule and at least four of them are undergoing financial reorganization in bankruptcy or receivership actions.

### Crucial Year Ahead

The crucial year for the aircraft companies will be 1948. This year there were tax carrybacks to bolster financial positions. This year too, there are some carry-overs on military contracts made before budget slashing became the fashion among vote-seeking but short-sighted members of Congress. There are orders on the books for some 800 commercial transports, many of which will be delivered within the next year or so. Then what?

Commercial transports now on order will provide between 40,000 and 45,000 seats. A year ago the airlines were operating planes with a capacity of around 24,000 seats. New planes will nearly double the space available. Average speed will be up from around 200 mph to 300. That means increased frequency of flights. Combination of increased capacity and speed will take care of air travel for some time to come, which means no replacements, which means no new orders for transports until something entirely new

## Industry Gloomy Congress Reassuring

comes along—jets perhaps—and that's a long way off.

It has been estimated, and grim job it was, just how long the industry's backlog would sustain it—with no more orders for commercial craft. There are now some 200,000 employed. The summer peak will raise this to more than 230,000. The total will then begin to taper off and a line on a graph simply would disappear by the end of 1946.

Keeping the air force up to date would keep the industry alive. Civil and military business between the wars was not sufficient to maintain it. In 1918 there were 17 companies. By 1922 this had dropped to seven and in 1926 there were only three major producers. While none of the major companies has failed since the end of World War II, there are those who faced shortages of working capital and several considered orders on hand insufficient for survival.

### Social Policy Wins Out

Appropriations made available by Congress under present consideration can support perhaps a half dozen major companies in military contracts. There is a large question whether these appropriations can support 20 or even a dozen. In this connection social policy and national defense have come together. Social policy came out on top. This refers, of course, to proposed mergers within the industry, mergers which undoubtedly had the tacit blessing of the armed forces. They did not receive the blessing of the anti-trust division of the Justice Department, for reasons that for the moment are obscure.

The U. S. aircraft industry contracted from stratospheric war proportions of a \$16,000,000,000 annual business to around \$1 billion in 1946. The present budget calls for military orders of approximately \$700,000,000. All of which speaks for itself.

The yardstick for minimum needs, set up by the Aircraft Coordinating Committee, an inter-governmental agency, is 3,000 planes annually. With appropriations presently contemplated this would be reduced to around 1200. Part is due in unit decrease, to large orders for B-35, B-36 and B-50, long-range heavy bombers which dominate military procurement.

Prompt action by Congress on a five year program will assure sound growth of the industry and without it there are indications of deterioration in both military and civil aviation.

## Rep. Engel Promises Substantial Air Orders

By GERARD B. DOBBEN

Realism in the face of world turmoil will temper the axe-wielding bent of House Republican leaders who will write military aviation's procurement program for fiscal 1948.

Spokesman for the group is Rep. Albert J. Engel (R., Mich.), dynamic chairman of the War Department subcommittee of the Appropriations Committee. Engel fully realizes the aircraft industry's present plight. He also is fully cognizant of the industry's unparalleled position of importance in today's scheme of national defense.

"While I cannot state now what our construction program tomorrow will be in number of aircraft and dollars and cents, whatever it is will be substantial and in keeping with the needs of our national defense," Engel declared in an exclusive interview granted *American Aviation*.

Engel said this country's real strengths lie in: 1. The production capacity of our industry. 2. The ability to convert that industrial capacity from peacetime to wartime production in the shortest time possible. 3. In a manpower training program, both in industry and the Army, which will give us in the shortest time possible personnel to operate production machines, and trained men to man each weapon, tank, plane or ship as fast as they are produced.

### Aware of Aircraft Problems

Engel is well aware of the difficulty aircraft plants are experiencing in contracting from a wartime to a peacetime basis.

"It is made more difficult because the government has no definite production policy for the future by which military requirements may be gauged," he said. "Unless such a policy is quickly formulated many of our best and most valuable aircraft industries will be unable to survive."

Engel said that for the present there probably was adequate military production in sight to carry through next year, perhaps for two years.

"It takes five years or longer, under peacetime experience, to develop a large type of military plane. This means these companies must have long term planning programs if they are to furnish the production required by the government in case of an emergency."

"Everytime a large transport plane is built, we have added an asset to our national defense because it can be commandeered in war time. Individual companies making up the aircraft industry cannot afford to develop big

new  
which  
best  
Unles  
willin  
sider  
and th  
build  
them  
not be  
unab  
tion  
airpla

Eng  
amount  
and ap  
velopm  
types  
the su  
stratos  
at tra  
beyond  
financ  
through

"The  
industr  
magnif  
develop  
militar  
militar  
our abi  
degree  
tween  
the wa  
ductive  
extra  
declare

Engel  
time re  
aviation  
A. Spaa  
Army  
Echols,  
the Ai  
These m  
in an ef  
coordin  
governm

"I bel  
continu  
Army,  
dustry  
that a p  
indicate  
will me  
requirem

Rocket

The F  
Worth h  
by the  
engineer  
185. Pro  
sume for  
New  
build th  
cessor bu  
set of er  
sary for

Jacobs

A. R.  
ager of  
Pottstow  
firm from  
500,000.

April 1,



new cargo or passenger type planes which would, in time of emergency, best meet the military requirements. Unless the Army and the Navy are willing to develop those planes, consider such development a military cost, and then permit aircraft companies to build them without charging against them the developmental costs, they will not be built. Those industries will be unable to make any financial contribution toward the development of the airplane of tomorrow."

#### Military Funds Needed

Engel is quick to agree that the amount of money required to do basic and applied research work in the development of military planes of all types which will operate not only in the stratosphere but also in the stratosphere, at not only super- but at trans- and hypersonic speeds, is beyond the ability of the industry to finance. If developed, it must be done through military appropriation.

"The survival of our present aircraft industry which has done such a magnificent job during the war; the development of both new civilian and military aircraft which will meet our military requirements will depend on our ability to continue at least to some degree the splendid cooperation between industry and government during the war which made possible a productive program beyond the most extravagant predictions of man," he declared.

Engel said he had spent considerable time recently with military and civilian aviation leaders, among them Gen. Carl A. Spaatz, Commanding General of the Army Air Forces and Gen. Oliver P. Echols, newly appointed president of the Aircraft Industries Association. These meetings were held, Engel stated, in an effort to bring about the required coordination between industry and government.

"I believe these meetings should be continued and that the Congress, the Army, the Navy and the aircraft industry should work together to the end that a program along the lines I have indicated may be formulated which will meet our present day and future requirements," he added.

#### Rocket Aircraft Closed Down

The Rocket Aircraft plant in Fort Worth has been completely shut down by the new management during re-engineering of the company's Rocket 185. Production is not expected to resume for 60 days or more.

New Rocket management plans to build the same airplane as its predecessor but feels that a completely new set of engineering drawings is necessary for proper production.

#### Jacobs Purchases Firm

A. R. Jacobs, v.p. and general manager of Jacobs Aircraft Engine Co., Pottstown, Pa., has re-purchased the firm from Barium Steel Corp. for \$1,500,000.

April 1, 1947

## Only 1.6% of Sales Turn Into Profits

A survey based on sales, wages and other costs of 11 major aircraft manufacturers disclosed that they paid out more than one-half of the total for materials and supplies, including subcontracting, with most of the remainder of the income disbursed as wages.

Oliver P. Echols, president of the Aircraft Industries Association, reported sales income of 11 companies was \$3,530,000,000 in 1945 and that 58.8% was paid out in materials and supplies; 29.4% was distributed to wage earners; taxes, depreciation and other expenses accounted for 10.2% and the rest, or 1.6% was left over for profits.

The industry's rate of profit on sales dropped from 10.3% in 1939 to 2.2% in 1942 to 1.0% in 1944. The aircraft industry's rate of profits on sales during the war, according to the Securities and Exchange Commission, was the lowest of any major war industry.

Last year showed a sharp decline since eight of the 11 companies reported operating losses. Sales last year amounted to less than \$500,000,000.

Executive salaries on the average amount to only one dollar per thousand dollars of sales. Dividends to stockholders amount to one half of a cent of the sales dollar.

## 2,054 Civil Planes Shipped in January

The increasing demand for three- and four-place personal planes, and the corresponding market slump of two-place planes is pointed up in the report of manufacturers' shipments during January.

Shipments of small two-place personal planes totaled 857 or 42% of the total January shipments, a decrease of 17% from the 1,034 two-place craft shipped during December. Shipments of three- and four-place planes, on the other hand increased 37%.

Of the 22,017 planes of all types on order at the end of January, 21,163 or 96% had airframe weights under 3,000 pounds. There were 31% more three- and four-place planes on order than two-place planes.

Manufacturers' shipments of all planes to other than U. S. military customers during January totaled 2,054 according to the report of the Bureau of Census and the Civil Aeronautics Administration. The value was \$8,300,000. This was an increase of 8% in number and 30% in value over the 1,909 planes valued at \$6,400,000 shipped during December. Of the 2,054 planes, only 20 had airframe weights of 3,000 pounds or more.

There were 857 two-place planes shipped in January and 1,176 three- and four-place planes as against 1,034 two-place and 861 three- and four-place planes in December.

## Manufacturing Personnel

H. Oliver West, recently elected president and general manager of Canadair, Ltd., aircraft subsidiary of Electric Boat Co., has been elected to the board of directors of the latter company.



Huxley



Straughn

William P. Huxley, who has been an assistant sales manager of Hamilton Standard Propellers division of United Aircraft Corp., has been promoted to sales manager. John F. Burridge, Frank C. MacTernan, John Lessner and Frank P. Christian, all installation engineers, have been transferred to the sales department, where they will continue customer contacts and assignments previously performed under the engineering department.

Robert W. Straughn has been appointed advertising and sales promotion manager of the Stinson division of Consolidated Vultee Aircraft Corp. He was formerly with Chrysler Corp.

R. Kenn Trenary has been named assistant to the president of Globe Aircraft Specialties, Inc. He was formerly with Washington Properties, Inc., owners and operators of several Washington, D. C., hotels.

H. Webster Crum, who joined the Goodyear organization in 1929, has been named sales manager of Goodyear Aircraft Corp. W. L. Leek is new head of the sales solicitation department, and W. E. Green becomes manager of merchandise control and sales operation.

Herbert J. Conover, formerly with the service department of Douglas Aircraft Co., has joined Greer Hydraulics Inc., in charge of the west coast office in Beverly Hills.

Robert W. Russell has been appointed administrative assistant in the Hamilton Standard Propellers division of United Aircraft Corp.

## Sherman Fairchild Forms Technical Consultant Firm

Sherman M. Fairchild, who recently severed connections with Fairchild Engine and Airplane Corp., of which he was a director and board chairman, has formed a new organization which will specialize in business analyses and forecasts with emphasis on technical development. The



Fairchild

organization, with offices at 30 Rockefeller Plaza, New York, will be known as Sherman Fairchild and Associates. Fairchild will continue his active work with Fairchild Camera and Instrument Corp., of which he is board chairman, and in Fairchild Aerial Surveys, Inc.



## FINANCIAL

### United, Braniff, Delta, Hawaiian and Pioneer Report 1946 Salaries, Stockholdings to CAB

Financial reports showing 1946 salaries and stockholdings for United Air Lines, Braniff, Delta, Hawaiian, and Pioneer Air Lines have been filed with the Civil Aeronautics Board, giving the following information.

#### United Air Lines

	Salary	Shares Common	Man-agement
W. A. Patterson, pres...	\$50,000	850	5,000
J. A. Herlihy, v. p.-operations	30,000	968	2,000
R. W. Ireland, v. p.-administrative	25,000	5	2,000
Harold Cray, v. p.-traffic	16,500	1,066	2,000
J. W. Newey, v. p.-finance	17,500	....	1,000
Hal E. Nourse, v. p.-economic control	14,000	1	1,000
R. F. Ahrens, v. p.-personnel	16,500	2	1,000
D. P. Magarrell, v. p.-passenger service	16,500	1	1,000
S. V. Hall, regional v. p.-operations	15,000	10	1,000
S. P. Martin, secy. & asst to pres.	10,500	1	750
N. B. Haley, treas.	13,000	1	500
C. H. Blanchard, comptroller	8,400	1	500

Directors:			
Martin C. Ansorge	400	....	....
Gardner, Cowles, Jr.	2,500	....	....
Justin W. Dart	1,233	....	....
Paul M. Godehn	493	....	....
J. A. Herlihy	968	2,000	....
Paul G. Hoffman	123 1/2	....	....
Eric Johnston	100	....	....
John J. Mitchell	247	....	....
W. A. Patterson	850	5,000	....
United reported no holders of more than 5% of stock.			

#### Braniff Airways

	Salary	Shares Common
T. E. Braniff, pres.	\$24,000	289,524
R. C. Shrader, v. p.	15,000	1,200
C. E. Beard, v. p.	15,000	1,825
C. G. Adams, secy.-treas.	15,000	2,700
Directors:		
T. E. Braniff	289,524	....
C. E. Beard	1,825	....
R. C. Shrader	1,200	....
C. G. Adams	2,700	....
Hal C. Thurman	3,100	....
George A. Butler	5,000	....
Fred Jones	1,000	....
Roger J. Whiteford	150	....
Ferdinand Eberstadt	100	....
More than 5% stockholders:		
T. E. Braniff	289,524 shares or 28.95%	....
The Braniff Foundation	51,864 shares or 5.19%	....

#### Delta Air Lines

	Salary	Shares Common
C. E. Woolman, pres.	\$18,000	32,307
C. E. Faulk, chmn. of board	12,000	35,936 1/2
M. S. Bledenharn, v. pres.	....	2,220
Laigh C. Parker, v.p.-traffic	12,000	1,500
G. R. Cushing, v.p.-operations	15,000	780
Travis Oliver, treas.	1,200	1,885
C. H. McHenry, secy.	1,200	1,500
Catherine FitzGerald, asst treas.	3,600	3,300
L. B. Judd, asst secy.	9,400	1,950
Directors:		
C. E. Woolman	....	32,307
C. E. Faulk	....	35,936 1/2
Travis Oliver	....	1,885
C. H. McHenry	....	1,500
M. S. Bledenharn	....	2,220
D. Y. Smith	....	1,050
George R. Cushing	....	780
L. B. Judd	....	1,950
Laigh C. Parker	....	1,500
More than 5% stockholders:		
R. J. Reynolds	90,900	or 22.73%
C. E. Faulk	35,936 1/2	or 8.98%
C. E. Woolman	32,307	or 8.06%

#### Hawaiian Air Lines

	Salary	Shares Common
Stanley C. Kennedy, pres.	\$ 7,010	none
Alex. Smith, v.p. & secy.	13,840	none
Ford Studebaker, v. pres.	13,120	none
David Watson, treas.	....	none
Raymond G. Laclergue, asst treas.	6,477	none
Directors		
Stanley C. Kennedy	....	none
Henry S. Turner	....	75
Merwin B. Carson	....	450
P. K. McLean	....	none
J. E. Russell	....	none
G. P. Wilcox	....	none
Alex. Smith	....	none
More than 5% stockholders:		
Inter-Island Steam Navigation Co.	29,700	or 70.86%
Transcontinental & Western Air	8,406	or 20%

#### Pioneer Air Lines

	Salary	Shares Common
W. F. Long, chmn. of board	....	27,291
Robert J. Smith, pres.	\$ 9,281	26,818
Harold B. Seifert, v.p.-operations	3,900	none
E. W. Bailey, secy.-treas.	6,000	540
Directors:		
Gene Howe	....	100
J. Wesley Hickman	....	none
Lang Wharton	....	none
Raymond Pearson	....	1,000
W. F. Long	....	27,291
Robert J. Smith	....	26,818
Harold B. Seifert	....	none
More than 5% stockholders:		
W. F. Long	27,291	or 30.59%
Robert J. Smith	26,818	or 30.06%
E. Y. Holt	2,671	or 2.99%

#### Export-Import Loans, Credits Total \$12 Million in 18 Months

The Export-Import Bank of Washington, in a report to Congress, reveals that during the past 18 months it has made loans or arranged credit amounting to \$11,960,000 to aviation enterprises in foreign countries for the purchase of aeronautical equipment in the United States.

Loans and credits were granted to the following: Panair do Brasil, \$3,000,000; TACA Airways and TACA Airways Agency, \$2,000,000; Turkish State Airways, \$3,060,000 and Aeronautical Radio de Mexico, \$3,000,000.

AMERICAN AVIATION

Precision counts in printing, too! Rely on Rand McNally

Years of experience give Rand McNally the precise "know-how" that means accuracy and dependability in transportation printing. We've been at it for 90 years, and you can be sure that the flight-maps, booklets, folders, tickets, and timetables printed for you by Rand McNally will be as dependable as experience can make them. Our staff of experts will be glad to advise you on any special printing problems you may have.



American Airlines Photo

CONSULT

**RAND McNALLY & COMPANY**

Established 1856

NEW YORK • CHICAGO • SAN FRANCISCO • WASHINGTON



# Operations and Maintenance Review

Including

COMMUNICATIONS—NEW EQUIPMENT—GROUND FACILITIES

## Small Air Fleets Best Suited For Progressive Overhaul Plan

### Merits Debated at ATA Maintenance Conference

By DAVID SHAW

Comparisons of the new idea of spacing major overhaul work throughout routine maintenance periods, against the old method of letting everything accumulate until the plane is pulled out of service for major overhaul at the end of 6,000 to 8,000 hours of service, received nearly three hours of open and sometimes heated discussion at the closing session of the ATA engineering and maintenance conference which ended March 19 in St. Louis.

Although airline experience with progressive overhaul is quite limited, certain operators were able to offer information of real value to others who feel that the progressive spacing of overhaul may be economically sound with the bigger planes they are getting. Army and Navy representatives were present to describe their experiences with both systems.

In brief, progressive overhaul was presented as offering fairly certain advantages with smaller fleets and a central service base through which all fleet aircraft pass at regular intervals for maintenance. The advantages appeared to be more debatable with fleets consisting of 30 or more planes scattered over a large system. Representatives of the larger airlines raised numerous questions on problems of scheduling work, funneling replacement parts, and getting full personnel utilization.

#### Cost vs. Utilization

Two basic considerations seemed to present themselves to all operators: (1) does progressive overhaul require more or less man hours than a periodic major overhaul for completion of all work necessary in an operating cycle, and (2) can man hours and other costs be considered secondary to getting greater aircraft utilization by arranging for completion of certain overhaul items every time a plane is placed out of service for routine number 1, 2 or 3 checks.

Considerable valuable information was offered by TWA's International Division which started progressive overhaul during its war contract operations and has continued it with apparent success. Edwin Zak, representing TWA International, explained that his organization was operating

only 12 planes—all of which had to come into Wilmington and be taken out of service for periodic checks. He said that studies indicate that less efficiency would be found if the fleet was expanded to 30 planes or more.

TWA International's maintenance and overhaul are so integrated, Zak said, that no time extension is made during check periods in order to take care of overhaul items. At the end of an operating cycle all overhaul is completed, even wing and control surface replacements and cabin redecoration, and there are no leftover items at what normally would be a major overhaul period.

#### Careful Planning Required

Zak acknowledged that the progressive system requires careful advance planning to get planes into the hangar when replacements are due, and to insure that parts will be ready as required. He also said that in starting with a new fleet it was necessary to stagger replacements at other than normal periods in order to have a practical balance of work in future operating cycles.

The contention of other airlines that personnel, particularly specialists,

might alternately be overworked and idle in progressive overhaul was countered by Zak with evidence that work can be balanced between shop and hangar so that personnel are kept busy on repairable parts in the shops when the hangar is empty. He added that this has been found to give mechanics secondary skills which they would not acquire on full-time overhaul work.

James H. MacMaster of Trans-Canada Air Lines said that his company has started following a modified RCAF progressive overhaul system which closely resembles TWA International's except that it requires considerably more clerical work to maintain company-required records.

H. F. Salisbury reported that United Air Lines still is studying progressive overhaul theories. He said that while United likes to keep line maintenance as a separate item, ways are being sought on DC-4's to accomplish certain 8,000 hour items at 4,000 hours or shorter intervals.

Eastern Air Lines indicated that it still pulls planes out of service for all major overhaul at 8,000 hours and is not planning immediate experiments with progressive overhaul as a means of increasing its already enviable aircraft utilization figure.

Service representatives for Douglas Aircraft Co. told the conference that they had looked into making an industry-wide study of progressive over-



**Source of Stratocruiser Power**—A cutaway model of the 3,500 horsepower Pratt & Whitney Wasp Major engine, four of which will power the 67½-ton Boeing Stratocruiser, is inspected here by officials of American Overseas Airlines. Examining the 28-cylinder engine are J. G. Flynn, v. p.-operations; C. T. Robertson, superintendent of flying; W. C. Ray, director of maintenance and overhaul; W. C. Lawrence, chief engineer, and J. Y. Craig, director of flight operations. AOA is scheduled to receive eight of the double-deck transports during 1947-48.



haul, but had concluded that differences between the airlines were so great that it would be necessary to go into each airline's shops and prepare a lengthy and complex analysis which might be of no help to other companies.

Production-line maintenance and overhaul methods received brief discussion at the close of the session, but few conclusions were reached except that such methods, as carried out successfully by the Army and Navy during the war, required a far bigger fleet of planes than any airline can anticipate having to service.

## Superiority of Thermal Anti-Icing Shown in UAL Tests with DC-6

Results of a flight testing program on the thermal anti-icing system of the new Douglas DC-6, recently concluded by United Air Lines on the west coast and now being compiled into a full report, were summarized before the recent ATA engineering and maintenance conference in St. Louis, March 17-19.

"The DC-6 is not yet an 'all-weather' plane," United's A. M. Salmon told the conference, "but it is obviously superior to any UAL plane using other systems."

Shortcomings found in the tests had to do mostly with items not directly a part of the thermal system—radio antenna and masts, carburetor air scoops, and cowl rings. Areas heated by the thermal system were found to remain free of ice under the most severe conditions United could find along the west coast and over the Rockies.

**Goes Through Severe Icing**  
Salmon illustrated this point by reporting that on one flight between San Francisco and Cheyenne the DC-6 went smoothly through icing conditions so severe that a simultaneous DC-4 flight twice stalled out due to the weight of accumulated ice and finally had to return over the coast to get more altitude.

Hot air on the windshields was found highly effective except when, for test purposes, it was allowed to accumulate to considerable thickness before applying heat. Under these conditions the sheet of ice tended to remain pressed against a layer of water melted next to the glass.

It was found possible, after letting ice build up on the plane until air-speed dropped 25 mph, to de-ice empennage in 35 seconds and outer wing panels in 60 seconds. An incidental observation to these tests was that the combustion burner worked with somewhat greater efficiency if the pilot throttled back slightly to keep fuel and air intake at a more efficient ratio.

Further study was indicated to be necessary on propellers. In the tests, two props had thermal heat and the other two were equipped with conventional alcohol systems. United said that little difference between the two could be found.

## New Connie Becomes First Commercial Plane Certificated for More Than 100,000 Pounds

With the award of a type certificate for the new Model 749, the Lockheed Constellation has become the first commercial passenger airplane to be certificated for more than 100,000 pounds.

The new certificate for the long-range Connie authorizes take-off at a top gross weight of 102,000 pounds.

"With 40 passengers and more than a ton of baggage and cargo, long-range Constellations can fly non-stop between New York and London, if desired," said Hall L. Hibbard, vice president and chief engineer of Lockheed. "Even in the face of prevailing head winds on the westbound North Atlantic flights, substantial payloads may be carried without time-consuming fuel stops at Newfoundland and Ireland. No other airplane flying today or scheduled for operation this year can approach this performance," Hibbard added.

Lockheed's Model 749 is the long-range version of the new so-called "Gold Plate" Constellation and is distinguished from the Model 649 by special fuel carrying outer wing panels.

els. Allowable gross weight of the Model 649 has been increased from 92,000 pounds to 94,000 pounds.

Both the new "Gold Plate" Model 649 and the 90,000-pound Model 49 now in operation on the airlines can be fitted for long range service through the addition of the outer wing panels so that it is possible to obtain certification of any Constellation for 102,000 pounds, Hibbard said.

In the new models, the Constellation's speed has been increased from 300 mph to 328 mph for normal cruising by the installation of Wright 3350-BD1 engines having 2500 hp each at takeoff.

The Model 749 and Model 649 Constellations have the new-style interiors, including sleeper accommodations, and are equipped with the cabin comfort system developed by the AiResearch Manufacturing Co. This is a complete supercharging, cooling and pressure control system.

Hibbard said the CAA flight tests for approval of the 102,000 pound Constellation were completed in record time of only 34 days.

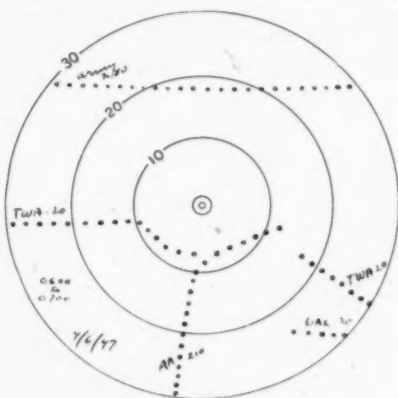
## VHF Communications System Tested by Santa Fe Skyway

Plans for a 12-state VHF communications system for Santa Fe Skyway are being tested at various points from Topeka west to Los Angeles, with a mobile railroad laboratory car acting as the ground station and a Santa Fe DC-3 airfreighter conducting the aerial part of the tests.

L. R. Thomas, Santa Fe's electronics engineer, said that the tests will deter-

mine the number of ground stations and remote control points that would be required for a VHF system covering the area served by Santa Fe. The company proposes to locate control points on its established teletype circuits.

Santa Fe's projected communications system would be privately owned, would operate on a frequency assigned by the Federal Communications Commission, and would be a part of the nation's airways facilities coordinated by Aeronautical Radio, Inc., according to a Santa Fe statement.



## CAA Radar Screen—A possible graphic record

of radar scanning screen under development by the Civil Aeronautics Administration is shown here. By means of facsimile equipment, the path of a plane is recorded in dotted line. Once the traffic controller has identified a plane, he jots down the airline and trip number or plane's identification number, and is able to follow the course of the craft. This record on paper obviates the necessity of hooding a radar screen by day in order to see the pips.

## TWA, EAL Use Private Line Phone to Relieve Teletype

Overburdened teletype circuits have prompted two major airlines in the past month to install private line telephone circuits connecting key cities on their routes. Both of the airlines, Eastern and TWA, will keep their new lines open 24 hours a day for rapid exchange of information on schedules, weather and other matters which might delay service without rapid communications.

Eastern's new PLF line connects New York, Washington, Atlanta, Jacksonville and Miami. TWA's extends from New York to Los Angeles with tie-ins at Chicago and Kansas City.

On both lines, flight control and meteorology will have first priority in order to reduce schedule delays as much as possible. TWA even holds a system wide weather conference every six hours.



# TCA Finds Icing An All-Year Airline Operational Problem

By FRANK M. HOLZ

Trans-Canada Air Lines believes it has greater problems of operation in freezing and icing conditions than any other major airline. The problem is a major one and practically every TCA transport had to be extensively modified and specially equipped before being put into service, increasing both initial cost and cost of operation as compared with the fleet of the average airline in the States. Until TCA recently began to receive delivery of the four-engined Canadair DC-4M, its basic fleet consisted of Douglas DC-3's and Lockheed Lode-stars.

TCA's "winter" problems are not seasonal. Serious icing and freezing conditions may be encountered all year round on some TCA routes. In Canada, icing is most prevalent not in winter but during the months of March, April, May and October. During these months, some icing occurs on practically all flights between Vancouver and Lethbridge.

The three types of ice formation—rime, intermediate and glaze—may



Accumulation of ice on leading edge of wing.

accumulate at the rate of one inch of thickness per minute on wings and tail surfaces. Amber lights installed on the wings illuminate the leading edges and help the pilot to determine the rate of ice buildup and the efficiency of the pneumatic rubber "shoes" which split off the ice by inflating. Pneumatic "shoes" or "boots" are still TCA's chief method for shedding ice, but intensive study of thermal de-icing is under way.

For some years TCA has equipped its propellers with rubber feed shoes, largely a TCA development. These shoes are fixed to the leading edges of the propeller blades. Carefully computed open grooves worked into the shoes carry alcohol or de-icing fluid to attain uniform action over as much of the blade as possible. Without feed shoes, most of the fluid would be thrown off near the propeller hub. Recently the airline has been working closely with the B. F. Goodrich Co. in developing propeller feed shoes

## Costs and Weights of TCA De-Icing Equipment

	LODESTAR		DC-3	
	Cost	Weight	Cost	Weight
Wings .....	\$373	42 lbs.	\$634	50.5 lbs.
Stabilizer ....	150	16	198	12.0
Fins .....	114	10	82	4.3
Propellers ...	44	6	44	6.0
Miscellaneous break-down (pumps, piping, etc.) ....	not avail.	not avail.	not avail.	not avail.
Total .....	\$681	127 lbs.	\$958	125.8 lbs.
Anti-icing fluid for winter operations	7.7 gals. or \$1.52 per imperial gal.	61 lbs.	9.6 gals. or 76 lbs.	

extending to within four inches of the blade tips.

TCA also makes extensive use of anti-icing and de-icing fluids. Transports have piping arrangements which supply de-icing fluid to propellers, windshield, carbureters and pilot masts. The accompanying table shows a breakdown of the costs and weights of de-icing equipment and fluids carried on TCA's Lode-stars and DC-3's.

Ice is not the only sub-zero obstacle. In extremely low temperatures bearings are inclined to seize and lock. TCA computed the tolerances necessary to allow for unequal contraction of bearings so that seizures would be avoided. Control cable tensions are adjusted to allow for the difference in contractions between cables and fuselage structures.

Standard flexible tubing became stiff and brittle in severe cold and had to be replaced by tubing materials that retain pliability in temperatures under 45 degrees F. Hydraulic lines which snapped were replaced by new types. Controls were developed that would neither stiffen in extreme cold nor become "sloppy" in temperate conditions. Special attention was given to the operation of cockpit instruments through a wide range of temperatures.

Intensive research and tests have developed oils and fluids which do not

freeze or become sluggish under any conditions TCA might encounter.

To prevent carbureter icing, TCA has adopted a temperature for carbureter heat almost 50% higher than the common usage in the U. S. The induction system on both DC-3's and Lode-stars has been redesigned by TCA to obtain a greater flow of heat to the carbureters.

Still other precautions are necessary when TCA's planes are on the ground, even for short periods. Whenever possible, the transports are kept in heated hangars. Before they are moved outside to temperatures of 40° F. or less, a sail silk covering is usually slipped over the wings to prevent moisture condensation forming into ice. If the aircraft is outdoors in severe cold for any period, engines are shielded by a flax cloth cover and



Ice formation on propeller, near hub.

portable heaters are installed in or near the nacelles, oil tanks and the blower section. Before takeoff, frost and ice are washed off with anti-icing fluid.

In the days immediately after formation of TCA in 1937, the airline had to rely chiefly on the experience of Canadian bush flyers in planning scheduled operations in sub-zero conditions. No leading manufacturer had found it necessary to devise regular production equipment for the climate and temperature range under which TCA had to operate, and TCA had to pioneer development of much of the equipment it needed. Since that time, TCA has been aided greatly by extensive research and testing carried on in Canada by the Royal Canadian Air Force and the U. S. AAF. The RCAF has been operating a "winterizing" center at Winnipeg for over a year.

AERONAUTICAL RADIO DE MEXICO, S. A.  
AVE. MORELOS, NO. 37, MEXICO, D. F.

232 WOODWARD BLDG.  
WASHINGTON, D. C. 8  
EXECUTIVE 3848-5191



THOS. B. BOURNE & ASSOCIATES

AIR NAVIGATION ENGINEERS

A COMPLETE SERVICE IN AIRWAYS, AIRPORTS & COMMUNICATIONS ENGINEERING  
NATIONALLY & INTERNATIONALLY ASSOCIATED WITH AERONAUTICAL RADIO INC.



## Management ENGINE MAINTENANCE

• Preventive maintenance is "gospel" in airline operations. Engines and airframes constantly receive periodic checks and overhauls before something goes wrong. New instruments, new safeguards are constantly added to existing aircraft for better safety, greater efficiency.

• Other phases of air transportation also need "preventive maintenance" and constant improvement; business organizations can become obsolete as rapidly as aircraft. Just as maintenance men rely on special equipment such as Magnaflux to help detect flaws, so also does wise management rely on specialists in profit planning for objective assistance.

• John B. Thurston and Company, with specific experience in the air transport industry, "Magnafluxes" airline organizations. We find "defective parts" which cause financial loss and replace them with profit-proven systems.



**JOHN B.  
THURSTON**  
AND COMPANY

MANAGEMENT CONSULTANTS

343 LEXINGTON AV., N. Y., MU 3-0397

### Navy Gets Out Over Emergency Service for Commercial Aircraft

The Navy Department has ordered 14 Naval Air Stations within the U. S. to modify their Ground Controlled Approach equipment in order to provide emergency landing service for commercial aircraft.

Navy GCA controllers hereafter will be able to communicate with airline planes on VHF (140.58 megacycles) and with aircraft not equipped for VHF on standard control tower frequencies in the 200-400 kc. band.

Recent testimony before Congress disclosed that although airline pilots have been invited to use Navy GCA both for practice and in actual emergencies, little or no use has been made of the offer because civil aircraft do not receive frequencies allocated for Navy use of VHF.

### Southwest Gets Instrument Approvals

Instrument operations by Southwest Airways' feeder airliners at San Francisco and Los Angeles airports have been approved by the Civil Aeronautics Administration and will be instituted by all flights within near future, according to Ted R. Mitchell, general operations manager.

Mitchell estimated that instrument operations would enable Southwest to accomplish 50% of the flights which the line had been forced to cancel, due to its contact flight weather requirements, during the first 75 days of operation. The new approval also will at least halve the length of delays the company has been experiencing in departure of flights from the two terminals.

## 30 Hour Check

By DAVID SHAW

A LONG WITH a lot of new versions of old problems, the ATA engineering and maintenance conference in St. Louis (March 17-19) brought out a first class new problem which will get bigger as the airlines get more big planes.

The new planes have more gadgets, more things to get out of order, more sources of flight delays. It became apparent months ago that mechanical irregularities were causing costly and embarrassing delays with the DC-4 more than with the DC-3. New planes, not only because of the usual bugs of newness but because of their numerous gadgets, are expected to be worse. The airlines are groping for an answer.

The best answer proposed at St. Louis is to let flights go through even though certain equipment is inoperative—equipment not on CAA lists and not essential to safety but heretofore cause of holding up a flight.

Thus far Pan American seems to have gone further in this direction with a published list of items which can be left by line stations for fixing at terminals—unless a pilot wants to insist that the item be fixed prior to departure.

TWA International has a list of items on each plane which can be disregarded for repair at route stops. They make every effort not to delay planes until they get back to the U. S. United stated at the meeting that this gadget-fixing is causing serious concern and probably will result in instructions to stations to disregard certain out-of-order items. American's representatives said they have arrived at no program.

You'd think after 15 years of using metal-skinned airplanes the airlines would have all the answers on cleaning the metal. Apparently not. At least they talked about it for three hours at St. Louis, and came up with more questions than answers. The maintenance men had two concerns—finding machine or hand methods faster, cheaper and less harmful to finish; and convincing management so much cleaning isn't really necessary unless passengers will be revolted at the sight of a dingy airplane.

There seems to be a lot of difference from one airline to the next in the amount of paper work they are required to do on service trouble reports. Some operators are just making out one report—for themselves, the CAA inspector and the manufacturer. Others have to fill out CAA's Form 478, the manufacturer's service trouble report, their own company description of the incident, and sometimes the CAB's Form 454 where damage or injury has occurred.

Since most of this difference seems due to personal notions of CAA field men, a standardized reporting system is being devised by CAA. It would replace Form 478 and would require only a monthly summary to the CAA of flight interruption and irregularity cases.

After more than a year of controversy on methods of sealing DC-4 fuel tanks, it seems pretty well established that care in installing the seal is more important than the type of sealing compound used. Airlines have had both good and bad experience with each of the most-used thiokol-base sealants, and all of the bad jobs can be attributed to poor workmanship or inadequate curing of the seal.

AMERICAN AVIATION



## AIRCRAFT ENGINE ACCESSORIES

7550 MELROSE AVENUE  
LOS ANGELES 46, CALIFORNIA

West Coast and Mexico representatives of Aircraft  
Components Corp. of Alexandria, Va.

Telephone  
WHitney 6421

Cable Address  
HENAIR, LOS ANGELES



## Operations-Maintenance Personnel

Frank M. Hull, assistant director of operations, has been appointed manager of transportation service for the Pacific-Alaska Division of Pan American Airways, succeeding T. K. Morris, who is on extended leave of absence because of ill health.

Harry W. Hirsch, formerly station manager for Eastern Air Lines at Greensboro-High Point, N. C., is now assistant station manager at Washington.

Marvie Lee Burnley, formerly with Douglas Aircraft Co., and Ann Carbee Dandridge, who previously was a junior draftsman for TWA, are now materiel control clerks for Western Air Lines at Burbank.

Charles Field, until recently superintendent of procedures and records for United Air Lines at Chicago, has been transferred to the company's work analysis division.

Richard M. Conley, assistant operations superintendent at San Francisco for Pan American Airways, has been appointed station operations manager at Burbank, Calif.

Sam Tate, formerly station manager for Eastern Air Lines in Tampa, Fla., has been designated regional field superintendent with headquarters in Miami. Tate joined EAL in 1936 as an agent in Baltimore.

J. T. Hoffman, Jr., formerly station manager for EAL at Brownsville, Tex., has been named city manager in Houston. He joined the airline in 1939 as reservation clerk in Atlanta.

Clay G. Boudreaux, formerly chief agent for EAL in Memphis, has been promoted to station manager in Dothan, Ala. He has been with the company since 1939.

## Larned Named Assistant Flight Director for UAL

W. E. "Slim" Larned, who has been with United Air Lines and its predecessors for more than 20 years, has been named assistant director of flight operations for United, with headquarters in Chicago. He formerly was assistant flight superintendent for the company's eastern region.

United has named L. T. Long as manager of engineering at San Francisco; J. S. Martin as superintendent of aircraft engineering at San Francisco, and E. U. Fairbanks as regional superintendent of engineering at Cheyenne, a position formerly held by Long.

## Vierling Resigns from PCA

B. J. Vierling has resigned as Pennsylvania-Central Airlines' director of engineering and maintenance to head his own consulting firm, Aircraft Advisors Inc., with offices in the Washington Hotel, Washington, D. C. He joined PCA in 1939, after being with Douglas Aircraft Co. Replacing Vierling will be James B. Franklin, PCA pilot, who has been with the company for 15 years.

## Student Pilot Must Pass Test

An amendment to the Civil Air Regulations which will become effective April 1 requires that a student pilot, before making his first solo



**Battery Lift**—George Freeman (left) of Miami, Fla., Eastern Air Lines electrical foreman, demonstrates the ease with which his newly-invented lift installs and removes batteries from a DC-3. The invention is said to eliminate the difficulty of installing 80-pound batteries by muscle power alone. A. L. Chabot, EAL superintendent of maintenance, looks on.

flight, shall pass a written examination on pertinent provisions of Part 43 and those of Part 60 dealing with contact flight rules.

Previously, student pilots were required to pass this examination only prior to his or her first cross-country flight.

# THE BABB CO., INC.



## WORLD'S LARGEST DEALER IN AIRCRAFT, ENGINES, ACCESSORIES SUPPLYING LEADING AIRLINES, GOVERNMENTS THRUOUT THE WORLD

The following Airline Equipment is available—

Douglas: C-54s, C-47s, DC-3s, DC-2s

Consolidated: Catalinas and Amphibians

Curtiss: Commandos, C-46s

Grumman: Goose G-21s, Widgeons

North Americans, Fairchilds, Vultees, Stinsons, Wacos, Stearmans

Lockheed: Lodestars, Hudsons, Electras

Boeing: 247-Ds

Beechcraft: Commercial Model 18s, Military AT-11s, AT-7s

Sikorsky: S-43s

## ENGINES AVAILABLE

Pratt & Whitney: R-2800s, R-2000s, R-1830s, R-1340 and R-985 all series.

Wright: R-1820, R-975, R-760 all series.

Jacobs: 300—285—245—225 h.p.

Lycoming: 300—280—260—245 h.p.

Propellers, Instruments, Radios, Accessories, Hardware

"If we can't supply it—it doesn't exist!"

U. S. Export Registration No. 124

1007 Airway

Grand Central Airport

Glendale 1, California

Cable address: BABBCO, Los Angeles, New York

East Coast Office  
444 Madison Avenue  
New York 22, N. Y.

Babbco, S.A.  
Cipres 164  
Mexico, D. F.



## Classified Advertising

The rates for advertising in this section are as follows: "Help Wanted," "Positions Wanted," "Aircraft Wanted or For Sale," and all other classifications \$1.00 a line, minimum charge \$4.00. Estimate bold face heads 30 letters and spaces per line; light body face 40 per line; box numbers add two lines. Terms, cash with order. Forms close 20 days preceding publication date. Rates for display advertisements upon request. Address all correspondence to Classified Advertising Department, AMERICAN AVIATION PUBLICATIONS, 1317 F Street N.W., Washington 4, D. C.

### POSITIONS WANTED

**TRAFFIC DEPARTMENT MANAGER:** Man with 11 years background airline work including 4 years airport, 7 years sales and traffic management, desires domestic assignment. Box No. 556, American Aviation, 1317 F St., N. W., Washington 4, D. C.

**AIRLINE TRANSPORT PILOT:** 8446 hours all types, 2440 hours multiengine DC-3 and DC-4. Specialist as multiengine Instructor and Check Pilot for ATR & HPR, desires position with established company or individual. Box No. 557, American Aviation, 1317 F St., N. W., Washington 4, D. C.

**PILOT:** Recently discharged Army Captain, four years experience with A.T.C. holding single/multi land commercial and instrument ratings. Total 2200 hrs. 800 C-47, 650 C-46. Age 27, single, free to travel. Desires position as executive or private pilot, or a connection with a permanent future. Box No. 558, American Aviation, 1317 F St., N. W., Washington 4, D. C.

**AIRLINE TRANSPORT PILOT,** age 33, eleven years flying experience, 3100 accident free hours on single, twin and four engine ships, flight instructor and instrument ratings, testing experience. Prefer position as personal pilot for firm or individual. Good references. Box No. 559, American Aviation, 1317 F St., N. W., Washington 4, D. C.

### Cabin Sealing Compound

The Coast Paint & Chemical Co., manufacturers of sealants for wing fuel tanks, has announced development of a new Pro-Seal product for sealing pressurized aircraft cabins. Called Pro-Seal No. 349, it is designed to act as a reflow solution over Pro-Seal Compound No. 279 and as a prime sealant over rivets. A Thiokol solution, it has a non-volatile content of 28%, weighs approximately 10.5 lbs. per gallon, and has a viscosity of 100 K.U. at 77 degrees F. It is prepared ready to apply and will dry tack-free in about six hours.

Products Research Co., Los Angeles 5, Calif., exclusive distributor for Coast Paint & Chemical Co., has available an eight page brochure giving historical data on modern tank sealing operations.

### FOR SALE

**OVERHAULED 1830-92 BLOWER** and rear section assemblies, ready for installation, consisting of parts 36163, 36161 and 35107, including PD12H4 carburetor modified and 2 Bosch SF14LU magnetos per assembly \$1650 FOB NYC. Charles E. Mathews & Co., 40 Columbus Hotel Arcade, Miami, Florida.

**Vultee SNV Trainer,** 540 h.p. P&W Wasp Jr. 10 hrs. since C.A.A. certification, full sets of instruments front and rear cockpit. C. E. Newton, 148-20 29th Ave., Flushing, N. Y.

**FOR SALE:** Airport and Farm—Ziegler Field, Warrenton, Va. Operating as commercial airport for past 13 years. Box No. 555, American Aviation, 1317 F St., N. W., Washington 4, D. C.

### Hinton Joins Luttrell & Senior

Sanford H. Hinton, supervisor of engineering flight analysis for American Airlines for the past five years, has resigned to join Luttrell & Senior, Inc., air transportation consultants. He will continue to act for American Airlines in a consulting capacity.

Hinton, author of the air transport text, "Cruise Control," is an authority on procedure developed under his supervision for testing aircraft and engine performance.

### Safety Inner Tube

A safety inner tube, the largest ever built for commercial airline planes, has been announced under the name "Life Protector" tube by Firestone Tire & Rubber Co., Akron, Ohio. Designed for tires with an overall diameter of 70 inches, the tube weighs 125 pounds, has an outside diameter of 63 inches and section width of 23 inches, and will carry a load of 30 tons at 115 pounds pressure.

The tube consists of a rayon cord "tire" within a heavy rubber air container. In the event of tire failure from puncture or blowout a special valve within the Life Protector holds sufficient air within the rayon emergency tire to permit a landing without dangerous lurching or sidesway.

## Advertisers In This Issue

Advertiser	Page
Frank Ambrose Aviation Company	24
The Babb Co. Inc.	41
Beech Aircraft Corporation	9
Bendix Aviation Corporation (Radio Communications Div.)	Second Cover
Thos. B. Bourne & Associates	39
Thos. Cook & Son	10
Dinkler Hotels	31
Douglas Aircraft Co.	5
Flightex Fabrics, Inc.	42
General Tire & Rubber Co., (Aviation Division)	22-23
Goodyear Tire & Rubber Company, (Aviation Products Division)	3
T. G. Henning Co.	40
Rand McNally & Co.	36
Minneapolis-Honeywell Regulator Co.	21
The Texas Company	Fourth Cover
John B. Thurston & Company	40
U. S. Rubber Company	16
War Assets Administration	32-33

## International Aeronautical Weather Service Formed

Dr. Irving P. Krick, head of the meteorology department of California Institute of Technology, is forming an international aeronautical weather briefing and forecast service.

The new company is Aeronautical Weather International and will be known as AERWIN. It will have headquarters in Los Angeles and will operate through affiliates of Dr. Krick's North American company, Krick Weather Service. AERWIN already is established in London, Paris, Brussels, Cairo, Hobart in Tasmania, Chicago, and New York.

While there has been a standardization of codes, observational and transmission techniques between the various governments of the world in handling raw weather data and exchanging it on an international basis, there has not been a similar standardization of technological methods of treating this data or in providing the highly specialized services required by aviation, Dr. Krick said.

Technicians from the foreign countries are given basic training at Cal-Tech before they join the AERWIN organization and at the present time Squadron Leader Murray Alexander, who helped the RAF develop Atlantic weather reconnaissance during the war, and four other representatives of the British affiliate are being indoctrinated at the school.

### WORLD'S PREMIER AIRPLANE FABRIC

LIGHTER

STRONGER

SMOOTHER

# FLIGHTEX

FLIGHTEX FABRICS, INC. • 93 WORTH ST. • NEW YORK 13, N. Y.

Leading Manufacturers of  
Fabric and Tapes for the  
Aircraft Industry.

FLIGHTEX FABRIC

Export Representative  
AVIQUIPO, Inc.  
25 Beaver Street, N. Y.  
Cable Address "Aviquipo"



*the airlines are big business —  
keeping them informed is our business*

**American  
Aviation**



**EASTERN AIR LINES—MAINTENANCE SHOP**

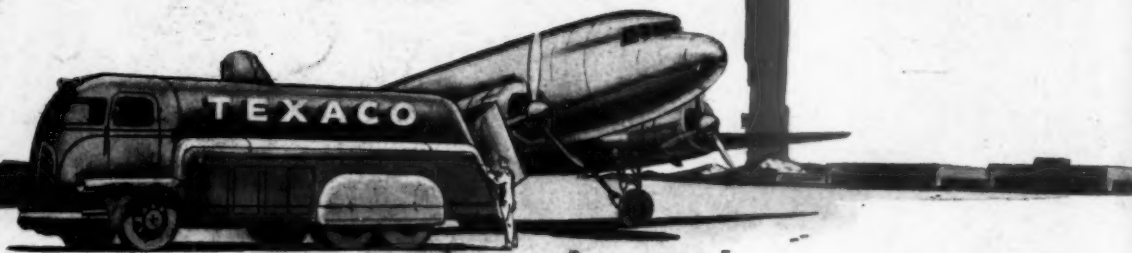
### Look at the Airline Market

Airline maintenance requires substantial purchases annually within the aircraft industry. Some of the less obvious requirements which Eastern Air Lines will buy from other suppliers in 1947 are:

- 20,000 headrest covers
- 1,300 blankets
- 3,566 pillows
- 51,600 pillow cases
- 204,000 napkins
- 84,000 tray cloths
- 8,400 towels
- 3,447 yards of carpeting
- 9,273 yards of upholstery
- 1,146 yards curtaining
- 7,238 plastic trays
- 16,346 plastic cups
- 26,069 plastic salad bowls
- 3,825 plastic dishes
- 9,725 plastic tumblers
- 14,412 knives, forks and spoons
- 3,305,000 paper cups
- 28,584 boxes face tissues
- 1,633 metal food and liquid containers
- 34,600 buffet casseroles



# ATTRACT MORE BUSINESS TO YOUR AIRPORT



**F**LIERS are quick to pass the good word along when they find an airport that gives them what they want . . . service that's reliable, courteous, complete . . . and assurance of dependable performance that goes with lubricants and fuels world-famous for quality.

Choose with care the aviation products you'll sell. Your surest guide is the experience of experts. Choose the products preferred by leading airlines, aircraft manufacturers, and hundreds of successful airports across the country — *Texaco*.

☛ *Texaco has the industry's most complete line*

*of aviation lubricants and fuels — more of them meeting A-N specifications than any other brand.*

☛ *More revenue airline miles in the U. S. are flown with Texaco Aircraft Engine Oil than with any other brand.*

Let Texaco's outstanding performance, and the prestige of the Texaco name, build good-will and earn money for *your* airport. Call the nearest of the more than 2300 Texaco distributing plants in the 48 States, or write The Texas Company, *Aviation Division*, 135 East 42nd Street, New York 17, N. Y.



## TEXACO Lubricants and Fuels

FOR THE AVIATION INDUSTRY

Tune in . . . TEXACO STAR THEATRE presents the NEW TONY MARTIN SHOW every Sunday night. See newspaper for time and station.